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Case Studies of UMTA Private Sector Initiative Projects in Syracuse, Central New Jersey and Atlanta

UMTA/TSC Evaluation Series

Final Report
December 1987

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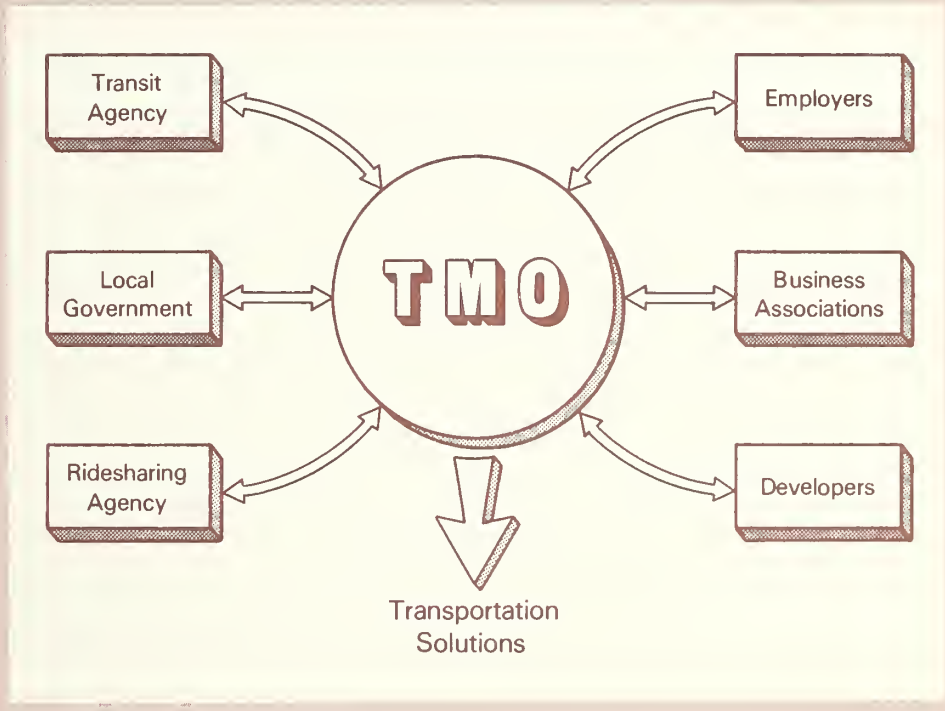

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Technical Report Documentation Page

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
UMTA-MA-06-0049-87-4		

4. Title and Subtitle	5. Report Date
Case Studies of UMTA Private Sector Initiative Projects in Syracuse, Central New Jersey, and Atlanta	December 1987
	6. Performing Organization Code: DTS-49
7. Author(s): David Curry	8. Performing Organization Report No.: DOT-TSC-UMTA-87-12
9. Performing Organization Name and Address: Crain & Associates, Inc.* 120 Santa Margarita Avenue Menlo Park, CA 94025	10. Work Unit No. (TRAIS): UM527/R5631
	11. Contract or Grant No.: DTUM60-86-C-71299
12. Sponsoring Agency Name and Address: U.S. Department of Transportation Urban Mass Transportation Administration Office of Technical Assistance Washington, DC 20590	13. Type of Report and Period Covered: Final Report Aug 1983 - Feb 1986
	14. Sponsoring Agency Code: URT-30

15. Supplementary Notes

*Under contract to: U.S. Department of Transportation
Research and Special Programs Administration
Transportation Systems Center
Cambridge, MA 02142

16. Abstract

This report documents the results of three grants awarded in 1983 by the Urban Mass Transit Administration for Section 8 Private Sector Initiative projects. The grants were intended to encourage cooperative public and private planning for the solution of specified local transportation problems. The resulting projects involved transit services, ridesharing and flex-time promotion, traffic management, changes in parking policies or facilities, and potentially zoning, development, pedestrian, and bicycle policies or plans.

The grant recipients were:

The Metropolitan Development Foundation (MDF) in Syracuse, New York;

The Middlesex Somerset Mercer Regional Study Council (MSM), centered in Princeton, New Jersey and serving the three surrounding Counties for which it is named; and

Central Atlanta Progress (CAP), in downtown Atlanta, Georgia.

The first two of these organizations have evolved separate transportation management organizations (TMOs) for administering their grant and for receiving supporting donations from member firms. For them, the challenge grants were "seed money" that helped to finance both the transportation studies of interest and the organizing efforts for the TMOs. In contrast, CAP used its existing organization and private funding channels to act as a temporary TMO in managing a feasibility study of a downtown bus loop that will likely be operated by the local transit agency, MARTA, without significant further involvement by CAP.

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17. Key Words	18. Distribution Statement
Transportation Management Association, Transportation Management Organization, Ridesharing, Transit Service, Parking	DOCUMENT IS AVAILABLE TO THE PUBLIC THROUGH THE NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VIRGINIA 22161

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price
Unclassified	Unclassified	100	

PREFACE

This report presents three case studies of private sector organizations that were awarded grants in 1983 from the Urban Mass Transportation Administration (UMTA) for Section 8 Private Sector Initiative Projects (also referred to as "challenge grants" by UMTA). The three case studies constitute the three sections of this report, each with a common outline:

1. Geographic setting and transportation issues
2. Transportation project aims
3. Form and history of TMO
4. Project results and TMO evolution through January 1986.

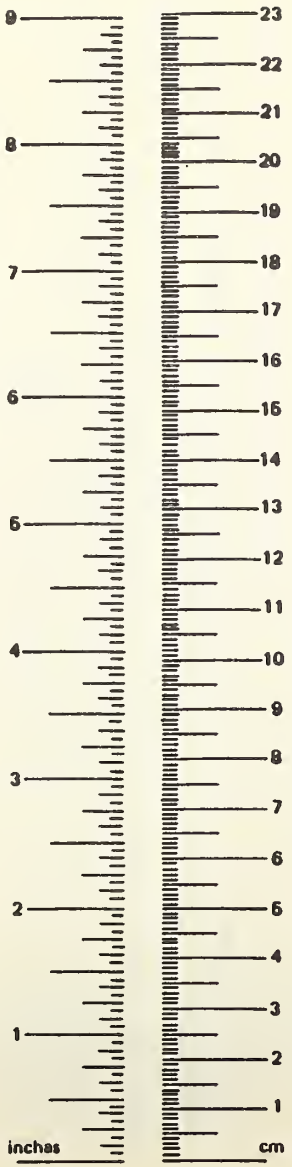
We are grateful for the continued support of the local project managers for the challenge grants in preparing these case studies. They were: David Mankiewitz of MDF, Nancy Podeszwa of MSM, E. Larry Fonts of CAP, and Ed Armentrout of CAP. Eric Schreffler was the TSC project manager for this evaluation, and Jim Bautz was the project manager for UMTA.

METRIC CONVERSION FACTORS

Approximate Conversions to Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
in	inches	*2.5	centimeters	cm
ft	feet	30	centimeters	cm
yd	yards	0.9	meters	m
mi	miles	1.6	kilometers	km
		AREA		
in^2	square inches	6.5	square centimeters	cm^2
ft^2	square feet	0.09	square meters	m^2
yd^2	square yards	0.8	square meters	m^2
mi^2	square miles	2.6	square kilometers	km^2
	acres	0.4	hectares	ha
		MASS (weight)		
oz	ounces	28	grams	g
lb	pounds	0.45	kilograms	kg
	short tons (2000 lb)	0.9	tonnes	t
		VOLUME		
tsp	teaspoons	5	milliliters	ml
Tbsp	tablespoons	15	milliliters	ml
fl oz	fluid ounces	30	milliliters	ml
c	cups	0.24	liters	l
pt	pints	0.47	liters	l
qt	quarts	0.95	liters	l
gal	gallons	3.8	liters	l
ft^3	cubic feet	0.03	cubic meters	m^3
yd^3	cubic yards	0.76	cubic meters	m^3
		TEMPERATURE (exact)		
°F	Fahrenheit temperature	5/9 (after subtracting 32)	Celsius temperature	°C

*1 in. = 2.54 cm (exactly). For other exact conversions and more detail tables see NBS Misc. Publ. 286, Units of Weight and Measures. Price $2.25 SD Catalog No. C13 10 286.



Approximate Conversions from Metric Measures

Symbol	When You Know	Multiply by	To Find	Symbol
		LENGTH		
mm	millimeters	0.04	inches	in
cm	centimeters	0.4	inches	in
m	meters	3.3	feet	ft
m	meters	1.1	yards	yd
km	kilometers	0.6	miles	mi
		AREA		
cm^2	square centimeters	0.16	square inches	in^2
m^2	square meters	1.2	square yards	yd^2
km^2	square kilometers	0.4	square miles	mi^2
ha	hectares (10,000 m^2)	2.5	acres	
		MASS (weight)		
g	grams	0.035	ounces	oz
kg	kilograms	2.2	pounds	lb
t	tonnes (1000 kg)	1.1	short tons	
		VOLUME		
ml	milliliters	0.03	fluid ounces	fl oz
l	liters	2.1	pints	pt
l	liters	1.06	quarts	qt
l	liters	0.26	gallons	gal
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m^3	cubic meters	1.3	cubic yards	yd^3
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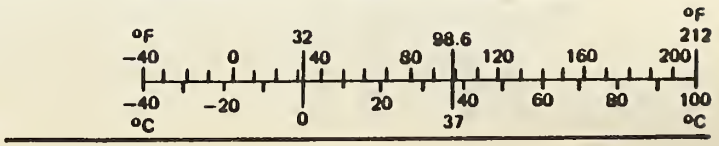
°C	Celsius temperature	9/5 (then add 32)	Fahrenheit temperature	°F



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1. DOWNTOWN SYRACUSE AND UNIVERSITY HILL

1.1 GEOGRAPHIC SETTING AND TRANSPORTATION ISSUES

Syracuse is a city of 170,000 population located in upstate New York. It is the central city for a large metropolitan area, currently at a population of 650,000. The regional economy is changing in emphasis from manufacturing to service industries, creating a growing concentration of employment in downtown Syracuse. Besides the retail core of the city, these service industries now include all levels of government, financial and insurance firms, hotels, cultural attractions, some apartments, and, especially in the adjoining University Hill area, schools, hospitals, and other medical enterprises.

The growth is continuing, spurred by revitalization efforts to increase the cultural and recreational attractiveness of downtown Syracuse for employees and visitors. Along with the growth is coming the usual access problems of dense urban centers: scarce parking, spot peak period highway congestion, and difficulties providing adequate transit service. The information on these problems that follows is principally summarized from References 1 and 2.

Figure 1* delineates the sixty blocks or so that comprise downtown Syracuse, and also shows the location of some 10,000 public off-street parking spaces out of a total of 11,000 such spaces. Another 2,000 on-street spaces are available, plus 5,000 private off-street spaces, for a total of 18,000.

The downtown area is served on its eastern boundary by I-81, the north/south freeway through the city, and on its north by I-690, the east/west freeway. These facilities merge in the section between Townsend and Salina Streets. University Hill is just off the map to the east.

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*Grouped with other illustrations in Appendix A.

About 32,000 persons work in this downtown area, two-thirds in some six million square feet of office space. Large numbers of shoppers and visitors arrive daily. Parking supply is presently in approximate balance with demand (90% peak parking utilization was observed in 1981), though on a localized basis some areas are short of parking while others have a surplus. Moreover, projected increases in office space alone will require 2,800 more spaces by 1990, and new hotel, retail, and residential facilities will add to parking demand. Already, there are few accessible spaces left for retail shoppers and others who arrive after the morning rush hour. Yet, there are presently no plans for additional new public parking facilities.

Increasing the supply of parking is impeded by the rising cost of land and opposition to replacing any further historic buildings with parking lots or structures. The alternatives are decreasing parking demand (through increased ridesharing and transit use) or increasing parking prices, which could discourage growth of retail trade and possibly other enterprises. Parking charges are now sometimes out of alignment with nearby needs, especially at some retail center garages that offer attractive all-day parking rates and as a result have restricted spaces for midday shoppers.

A more serious pricing problem is the widespread provision of subsidized employee parking by many firms at little or no cost to employees, which encourages the use of single occupant autos (about 16% of the 40,000 daily work trips to downtown Syracuse are currently made by bus). Even public parking is sometimes provided at low rates, as with the case of New York State's parking areas under elevated freeways that charge $5 monthly.

Besides these parking issues, other downtown transportation problems include:

- Increasing cost to Centro, the regional transit operator, for providing high quality bus service as suburban sprawl increases the low-density residential areas served.

- The scattered state of the downtown skyway system, which is planned for pedestrian travel under cover between buildings to facilitate comfortable year-round walking to more transit routes and more remote parking. A system is needed, not the present assortment of individual facilities. (The planned Galleries of Syracuse retail, library, and office complex is already committed to extensive integration with surrounding areas by skyways, and will also create better parking space utilization.)

- The high peak congestion on major highways approaching downtown during peak periods, which is caused at least in part by uniform working hours and heavy dependance on single occupant automobiles for commuting.

- Some spot violations of emissions standards at peak periods.

- The deteriorating condition of many downtown sidewalks, which are both esthetic problems and safety hazards.

In addition to the downtown, intense peak period congestion and scarce parking are experienced in the University Hill area. The area has 15,000 employees, 21,000 students, and a 50,000 seat stadium (Carrier Dome) that hosts both cultural and sports events. Figure 2 presents a map of this area. Interstate 81 on the west border serves both for good access and as an undesirable traffic barrier to downtown Syracuse. Hilly terrain and several large facilities interrupt some of the east-west streets, most of which are narrow, adding to the congestion problems. Proposals for new and expanded developments in this area abound. A new hotel and conference center were recently completed. Parking availability is already inadequate on the Hill, even with some parking at remote lots served by shuttle bus. By 1990, a shortage of over 1,100 spaces is estimated. Transit patronage on the Hill is about 10% of daily work trips. Ridesharing rates are not known.

A final transportation problem for both downtown and University Hill has been the initiation of a five year period of reconstruction of the two main freeways leading to Syracuse to correct pavement deterioration and prevent structural damage. The first such action was closing of I-81 southbound through

downtown during the summer of 1984. The New York State Department of Transportation (NYSDOT) worked closely with local agencies and the private sector to plan for and help finance the resulting traffic diversion. The strategies included additional remote park-and-ride lots, initiation and rerouting of express bus service, and promotion of carpooling and transit use.

The need for these responses to the highway closure problem helped to unify transportation planning in the city and to galvanize the private sector into cooperative actions. For example, the Downtown Committee, comprised of the city's major downtown employers, cooperated with the Syracuse Metropolitan Transportation Council (SMTC, the MPO for the region) to distribute literature for downtown commuters. Appendix B reproduces a brochure explaining the closures and the alternatives available to concerned travellers.

The I-81 program has been highly successful and, as with the Los Angeles summer Olympics, anticipated traffic problems have been avoided by relatively low-cost transportation management actions. This is fortunate because some of the freeway closures in the next four years will be more extensive than those in 1984. Later follow-up surveys by the SMTC showed that:

- Most of the increased park-and-ride lots and express bus service continued to be well patronized.
- Many commuters persisted in their use of alternatives to driving alone after the restoration of freeway service, even though a temporary diamond lane on Old Liverpool Road was not continued.

1.2 TRANSPORTATION PROJECT AIMS AND SCHEDULE

The original Syracuse challenge grant application to the Urban Mass Transportation Administration (UMTA) for $30,000 was submitted in August, 1983, by NYSDOT for the Metropolitan Development Association (MDA) and its three affiliated organizations, the Metropolitan Development Foundation (MDF), the Downtown Committee of Syracuse (DTC), and the University Hill

Corporation (UHC), as described below. The purpose of the grant was to improve access to, and traffic circulation within, the University Hill and downtown areas of the City. MDF was nominated as the grant recipient because it had been organized as a nonprofit corporation, for such purposes under Section 501(c)(3) of the IRS code. It could therefore receive both public grants and private donations, and the private donations would be tax-deductible to the donor. Moreover, both downtown Syracuse and University Hill employers were involved in the private sector support of MDF.

The four tasks of the challenge grant project are to:

- Project trip and traffic demand to the area to 1993 in relation to economic trends and land use plans, and identify any inhibiting deficiencies in the current or prospective transportation system.
- Identify specific, implementable, and self-financing projects or programs to address such deficiencies in the University Hill area.
- The same for the downtown area.
- Examine the present system of private sector transportation subsidies and propose an alternative subsidy scheme that will 1) equalize incentives for parking and transit use, 2) reduce long term parking demand, and 3) favorably affect economic development.

In completing these tasks, maximum feasible use is to be made of six preceding transportation studies conducted between 1979 and 1984, so that emphasis can be placed on the completion of feasibility studies for appropriate actions and alternatives. The aim is to favor self-financing alternatives in each case, in order to minimize reliance on extremely limited local government funding.

The scope of the Syracuse study is extremely broad, but it was hoped that private sector sponsorship and support of the study would provide practical and widely-acceptable results that could be successfully implemented. In contrast, the earlier

studies dealt with only a portion of the scope outlined above, and in some cases had very limited community participation or backing.

UMTA approved the requested grant in September 1983, only a month after its formal submission. Its approval was probably expedited by exploratory talks directly with UMTA that had been conducted by MDA staff prior to the grant request. However, developing an acceptable project agreement between MDF and NYSDOT took 10 months, until July 1984, in spite of the best efforts of both parties and other reviewing agencies. An explanation of the delay requires some background information on the private and public sector organizations concerned with transportation and land use planning for the Syracuse area, so we provide that information next.

The MDA itself is an affiliation of chief executives from the area's 75 largest firms that was organized in 1959 to give the private sector more voice in urban renewal and other large planning projects. The MDA can act quickly with its small membership, board, and staff, compared with the Syracuse Chamber of Commerce with some 2,000 members. It is also more project oriented than the Chamber, which tends to be concerned with continuing programs.

The MDA has "spun off" three organizations with special assignments that still share some MDA board members, staff, and office space. The University Hill Corporation was formed in 1963 to assist in planning for the intensively developed hospital and university complex just east of downtown Syracuse. The Downtown Committee of Syracuse was organized by MDA in 1975 among large downtown property owners to focus on planning for that area. MDA also helped form an accompanying special assessment district for downtown improvements. Finally, the Metropolitan Development Foundation was formed in 1983 to facilitate receiving both donations from corporations and public grants for coordinating projects in the community interest under Section 501(c)(3) of the Internal Revenue Code.

MDF's charter is to combat deterioration of Syracuse by developing and disseminating plans for the area that offer solutions to urban problems. MDF is administering UMTA's $30,000 challenge grant and has added $32,540 in local private funding to the resulting project. Of this added amount, $15,000 was the cost of a parking study for University Hill that was completed in September 1984 in order to provide current transportation data on the Hill for the consultant that MDF planned to hire under the UMTA grant. The remaining $17,540 is in-kind service contributions from MDA and its affiliates.

There are a total of 14 staff members for MDA and its affiliates. The staff can work by temporary assignments to the organization needing their efforts. Average current assignments for the staff of 10 professionals are about as follows:

	Full-time Equivalent Professional Staff
MDA	3
University Hill Corporation	1
Downtown Committee	5
MDF	1

On the public side, the City of Syracuse has one transportation planner. He is assigned to current and short-range traffic planning. Public regional bodies include:

- New York State Department of Transportation (NYSDOT), whose role in submitting the challenge grant application to UMTA has already been mentioned.
- Syracuse/Onondaga County Planning Agency, a joint organization to handle land use planning for the city and county.
- Central New York Regional Transportation Authority (CNYRTA), whose operating arm (Centro) serves Onondaga county and the two adjoining counties of Oswega and Cayuga. CNYRTA board members are nominated by the Onondaga County Legislature, four by the Syracuse City Council, and the remaining two by the outlying county legislatures; all are confirmed by the Governor.

- Central New York Regional Planning and Development Board (CNYRPDB), the area's council of governments and NYSDOT's local administrative liaison for the MDF challenge grant project.

- Syracuse Metropolitan Transportation Council (SMTC), the area's metropolitan planning organization, which operates out of Onondaga County offices mainly as a group of contract employees. An important SMTC committee that also helps supervise the MDF project is the Planning Coordination Subcommittee of the Planning Committee, which in turn reports to the Policy Committee of the Council's Board of Directors.

The dispersion of public responsibility for land use and transportation planning in Syracuse, plus the relatively inactive role assumed by the City of Syracuse, creates both a need and an opportunity for the types of private sector initiatives provided by MDA and its three affiliated organizations. A united private sector can be more effective if there is no strong local government leadership in opposing directions.

The delays in getting MDF's project agreement approved so that UMTA funds could be granted to MDF are attributed by MDF to a "daisy chain" of government agency requirements. Several examples will indicate the type of delays involved:

- NYSDOT's requirement for seeking participation in the contract by minority and female owned firms took time to define for the agreement and even more time afterward, when advertisements and requests to NYSDOT produced no interested candidate firms. The requirement was finally met in part by the winning bidder on the contract, who subcontracted some work to a minority owned firm they had dealt with before. This was a simply solution, and had it been suggested in the beginning, would have saved a lot of MDF staff time.

- Both the payment schedule and the liability provisions of the agreement took time to work out so the public organizations involved would feel they were protected.

- Defining who was the grant recipient, seemingly a trivial question, was complicated by the IRS rules for 501(c)(3) organizations such as MDF. The IRS code permits MDF to receive grants for projects in the public interest, but serving in the role of consultant on the same project could be regarded as commercial work and

threaten the MDF's tax-exempt status. So, although NYSDOT was the logical grant recipient in this case, they could not, as originally proposed, engage MDF as the consultant to carry out the project. Also, the role of CNYRPDB as an intermediary agency had to be clearly specified. Eventually,

- NYSDOT remained as the grant recipient.
- CNYRPDB was designated as NYSDOT's local administrative liaison for the project.
- UMTA was said to have "awarded the implementation of the Project" to MDF, in accordance with the terms of the agreement.

Several interim drafts of the agreement were circulated for review before an agreeable version could be devised. Probably there was no way to have avoided the delays experienced in the MDF agreement process, but other cities might learn from this experience and be better able to anticipate with the type of delays encountered. It seems likely that other future public/private efforts will have to deal with similar funding and accountability issues. And reducing grant delays is especially important for the small staffs typical of downtown private sector associations, which are not experienced in these matters.

If there is no advance assurance that such delays can be avoided, it may be preferrable for UMTA grants to be made directly to the private sector organization. We understand that the main advantage of a chain of state and regional government agency pass-throughs or approvals is that it assures awareness and coordination of the project with those agencies. But it may be possible to obtain adequate coordination in a simpler way, as by specifying appropriate representation of cognizant agencies on the technical advisory committee for the project.

MDF acted quickly to issue an RFP for the challenge grant study after approval of their project agreement and receipt of UMTA funding in July, 1984. The RFP, developed earlier with assistance from the Regional Planning and Development Subcommittee of SMTC, was issued in August. A considerable amount of work

was being requested for the $26,500 award, but two responsive bids were received. The firm of Raymond, Parish, Pine & Weiner (RPPW) was selected in September by a panel representing NYSDOT, CNYRPDB, the University Hill Corporation, SMTC, and MDF. Work on the six-month contract was initiated on November 1, 1984, with the first significant study products due at the end of February, 1985.

1.3 FORM AND HISTORY OF TMO

MDF staff presented the concept of a TMO for Downtown Syracuse to the Downtown Committee at its meeting of October 25, 1984. The proposed TMO would consist of appropriate representatives from major downtown employers, preferrably a continuation of the I-81 committee that had been formed to deal with the effects of freeway repairs and closures. The suggeston was to keep the group small and let it focus on a limited number of downtown parking and transportation issue. Its work would begin with acting in an advisory capacity to RPPW, the transportation study consultants.

A resolution supporting the proposal carried unanimously. The 12 members appointed to the TMO are mainly the persons in each participating organization with the most interest or background in transportation matters. Generally, they are drawn from personnel directors or vice presidents for administration; one is a chief executive officer.

As specified by the project agreement, a technical advisory committee (TAC) for the project was formed, meeting first in the spring of 1984 and thereafter every two months or as directed by the chairperson. The original membership included the following representatives:

- All eight members of SMTC's Planning Coordination Subcommittee, consisting of two representatives each from NYSDOT and the City of Syracuse, plus one each from CNYRTA and Onondaga County.
- Six members from the University Hill Corporation.

Since designation of the 12 Downtown Committee members as a TMO last fall, they have been added to the TAC, bringing its total membership to 26.

The first duty of the TAC, now completed, was to create a consultant selection process. The TAC's current task is to review the products developed under the study contract with RPPW and to provide advice and support where necessary.

The TMO does not yet have corporate status separate from the Downtown Committee, but its title and charter give it more continuity than an ordinary committee or task force. Downtown Committee staff will serve the TMO's needs, and its main activity at present will be meeting with the TAC.

MDF and the Downtown Committee are considering eventual incorporation of the TMO, despite some feeling that a single-issue group may not warrant that degree of separate emphasis. The risk they see in incorporation is unnecessary trouble and expense for contributing to the solution of problems that will be ameliorated after implementation of results from the current downtown transportation study, at which time there may be little motivation for continued intensive participation by TMO members. On the other hand, it is clear that 1) the current study will not solve all of the transportation problems, but will only start on the highest priority solutions, and 2) the implementation phase of solutions, as well as the decision to implement, will benefit from review and contributions of ideas by the private sector.

An important timing consideration for incorporation is MDF's belief that the first priority for the I-81 group of business representatives that constitutes the TMO is broadening the emphasis of members' concerns to think more in terms of community needs and less in terms of the particular business that they represent. MDF believes that this will gradually happen through TMO members' participation in the TAC, and that the need for incorporation will arise naturally later. As part of this process, they plan to invite a speaker from the greater Hartford Ridesharing Corporation and an UMTA representative to present their experiences with TMOs and related matters.

1.4 PROJECT RESULTS AND TMO EVOLUTION THROUGH JANUARY 1986

Early Consultant Recommendations

The study consultant, RPPW, has reviewed other transportation studies and conducted interviews among all of the interested public and private organizations. In February, they provided summaries of journey to work data and other findings to date, including a list of 11 proposed options for possible feasibility studies during the remainder of the project. The proposals were weighted toward private sector participation and noncapital intensitivity. They were:

1. Employee transit subsidies, to balance the free or subsidized parking provided to commuters by many employers and to divert some auto users to the bus system.

2. Better parking pricing and timing policies (e.g., reservation or pricing of more spaces near stores for short-term parking), if cooperation can be obtained from private parking operators.

3. Creation of an "access trust fund" for new parking facilities, traffic flow improvements, increased transit services, etc., with contributions required from developers in the downtown and Hill areas.

4. Development of a universal parking and transit validation system, as in Bay City, Michigan, that provides downtown employees and shoppers with free or discounted parking or transit use.

5. Stronger emphasis on car and vanpooling, with preferential parking treatment for pool vehicles and possibly with vans provided or subsidized through the private sector, patterned after similar efforts by the greater Hartford Ridesharing Corporation.

6. Creation of a promotional-type transit service between the Hill and downtown, possibly as a demonstration coinciding with opening of the Galleries of Syracuse to test public response.

7. Subscription bus service between the Hill and selected residential areas.

8. Integration of the institutional parking and transit facilities on the Hill, for more efficient use of those resources.

9. Fringe parking/shuttle bus service to the Hill and downtown Syracuse, similar to that presently used by Syracuse University for students and employees.

10. Creation of zoning districts in the downtown and Hill areas that allow reduced off-street parking in exchange for transportation management improvements that emphasize alternatives to driving alone (and hence reduce parking needs).

11. Creation of zoning provisions to offer developers a density or height bonus in exchange for providing access-related amenities such as enclosed bus shelters, skyway connections to nearby buildings, or transit terminals.

Discussion of these recommendations at the March 14, 1985, meeting of the TAC produced the observation that several proposals (3, 10, and 11) addressed only new developers, which seemed both less equitable and less effective than including all employers in the requirements. The consultant and MDF plan to look further for possibilities that meet this consideration.

Ridesharing

One outcome of the Syracuse project is the prospect of increased ridesharing in downtown Syracuse. As of November, 1984, 216 carpooling applications had been received by SMTC from employees of major downtown firms contacted through the Downtown Committee. However, the SMTC's ridesharing program is at rather a low level, with only one part-time person assigned. A rapid increase in ridesharing rates seems unlikely unless more public or private sector resources are assigned to its promotion.

TSM Activities on University Hill

During the summer of 1985, the Crouse-Irving Memorial Hospital on University Hill developed a remote parking plan for its employees that will likely serve as a model for other similar approaches on the Hill. Crouse-Irving has a 600-space garage for employee and visitor parking that was overcrowded and creating hardships for both patients and workers.

Reviewing their problem in the light of the MDF studies to date, the hospital realized that they were undercharging their employees for parking through rates up to a maximum of $30 monthly, when nearby market rates averaged $50 monthly. They decided to raise their employee parking fees and at the same time to offer free employee parking and shuttle service from a remote lot.

Syracuse University had some 2,000 unused parking spaces at Manley Field, two miles from Crouse-Irving. However, the University was constrained in its ability to lease spaces to Crouse-Irving because it did not want to incur taxes and extra accounting work as a result of operating a profit-making business at the site. A solution was found through a lease rate of $11 per space monthly that would permit the University to net all of the revenue against its parking maintenance expenses. So Crouse-Irving now leases 400 spaces at that rate, for a total annual cost of $53,000.

The Manley Field lot is served by two Centro buses, leased with drivers for six hours daily at $37.50 per bus hour for a total annual cost of $112,000. Administrative costs of about $30,000 bring total annual costs to $195,000. Buses run from 6:00 to 9:00 a.m. and 3:00 to 6:00 p.m., on 7 to 8 minute headways. Security guards at the hospital will drive shuttle users back to the lot during off hours if necessary.

About 350 vehicles use the remote lot, and patronage has held up throughout the winter. The released space at the hospital garage has solved the crowded conditions there, and the hospital figures they are breaking even on the service through increased revenues for both short-term and all-day parking. By comparison, a new 350-car garage would have cost the hospital $3.1 million. Though this would be a one-time cost, the hospital was not prepared to fund such an expense; and the annual cost of the present program is only 6.3% of this one-time cost.

Another success story for TSM on University Hill concerns the Veterans Administration offices there, where parking is

severely constrained and free spaces are offered only for pools of three or more persons. About 450 of 600 employees there ride-share in order to utilize the free spaces. The VA was planning a 500-space garage that would provide ample parking at no cost to employees, but a request for the necessary funds was turned down in the 1985 VA budget process. The federal policy of a few years ago to charge for employee parking has been overturned by a lawsuit.

The MDF is seeking to gain support for extending these two examples to other employers on University Hill, and the consultant was charged in developing his report to emphasize such approaches wherever feasible. Transportation subsidies are less of a problem in downtown Syracuse, where there is already more commercial parking. Therefore, MDF hopes to encourage and facilitate corrective actions on University Hill first, preferably through employers giving a monthly salary raise comparable to the parking fee at the time it is instituted so that no one will be worse off--similar to adding rather than taking a freeway lane for HOV use. In addition, a Hill Parking Corporation would be sought to help coordinate, finance, and manage parking facilities.

The most serious obstacle to these plans at present is the U.S. Internal Revenue Service requirement that parking lots for not-for-profit agencies such as hospitals and universities shall not show a profit as a separate cost center. The hope is that the employer subsidy, in the form of transportation payments to employees, can be used as an offset to the "profits" from raising parking fees to market levels. If not, the proposal will probably fail, because these institutions are very unwilling to jeopardize the nonprofit status of their operations.

Employer Transportation Survey

Also during the summer of 1985, MDF circulated and tabulated results of an employer transportation survey to complement the consultant's work. Thirty-two firms, representing about half of

both downtown and University Hill employment, responded. Some key findings were:

- About 60% of the 27 responding downtown firms and all of the six University Hill respondents either subsidize employee parking or lease their own parking space--which is then provided to employees below cost.

- Half of the University Hill firms provide free employee parking compared with 4% of the downtown firms.

- The most severe employee transportation problem identified in both areas was cost of parking, followed by the location of parking, traffic congestion, and lack of bus or carpool services.

- Three of the downtown firms and two Hill respondents provide assistance to employees in organizing carpools; one Hill employer provides shuttle bus service to remote parking for its employees and clients; and one employer provides subsidies to bus commuters.

- Ten downtown employers and three from the Hill indicated an interest in talking with someone from the CARAVAN community ridesharing program at the Syracuse Metropolitan Transportation Commission. Regarding other alterations in existing transportation policies:

  - 30% of respondents indicated willingness to shift some money from an existing transportation program to an employee bus subsidy.

  - About 50% of all respondents (75% from the Hill alone) would be willing to change some transportation policies, principally by adding in-house carpooling assistance and cooperation with CARAVAN vanpooling efforts. Least popular was flex-time.

  - 88% of downtown employers and 80% of Hill respondents would not reduce the number of parking spaces they currently provide or increase parking charges to encourage commuters to alter their method of transportation to and from work.

The last finding cited above indicates the difficult nature of the efforts that MDF will be undertaking to gain more acceptance of the Crouse-Irving Model, which involves increased employee parking fees and constrained on-site parking. The two preceding findings suggest that greater employer marketing efforts by CARAVAN could be quite effective.

Remote Downtown Parking Lot

In the fall of 1985, a six-acre lot along the railroad tracks adjoining downtown was offered for sale to the City of Syracuse or MDF by Conrail under a provision that excess railroad property should first be considered for public or community purposes. The price is $300,000, and MDF is still studying (as of January 1986) the feasibility of using the area as extra parking for downtown Syracuse, which is only a short walking distance. Shuttle service has proven too expensive, and so far not enough prospective parking lot operators are interested to make sure of the economic feasibility of the purchase. The Syracuse Urban Renewal Agency may also be interested in financing purchase of the lot.

Consultant's Draft Report

In November, the consultant's draft report "An Access Plan for Downtown Syracuse and University Hill," (Reference 2) was delivered. The report considers a variety of approaches to access improvements for the two areas, and recommends four "innovation packages" of the most attractive alternatives:

- Access/development controls (requiring developers to take one or more TSM actions such as providing off-street parking, purchasing employee vanpool vehicles, constructing a transit terminal, providing skyway connections to an existing garage, and contributing to an "access fund" to finance such projects).
- Pricing policy strategies, particularly transit subsidies for employees, a universal validation system for providing free or discounted transit and parking discounts to shoppers and visitors, and preferential parking for high occupancy vehicles.
- Hill transportation management, entailing provision of fringe parking areas, use of shuttle buses, and establishing a Hill Parking Corporation.
- Targeted bus service, entailing either a Hill/CBD shuttle connection or subscription buses to the Hill.

The report elaborates these alternatives in some detail. The report sections on University Hill and pricing policy strategies seem well conceived and detailed enough to proceed with implementation discussions--which MDF is anxious to do on University Hill because of the momentum already achieved there. The section on access/development controls, in contrast, presents ideas for parking reduction incentives that have worked poorly or not at all in other cities, and seem to us unlikely to be effective in Syracuse--first because developers are not very interested in sharp reductions in parking availability for their tenants, second because the controls reach only new development and ignore existing employers, and third because the provision of ridesharing and transit incentives and promotion on a voluntary basis by private employers is rarely treated by the employers as a serious long-term responsibility. The consultant may be asked in revising the draft final report to include reference to other approaches, such as the TSM ordinance passed in 1984 by the City of Pleasanton, California.

One or Two TMOs?

MDF is not sure that a single TMO (e.g., the technical advisory committee for MDF's study that is effectively serving as a single TMO) is best to address both Hill and downtown Syracuse transportation issues, since there are few common problems between the two areas. As a result, for most of the TAC meeting time, one or the other group has to listen to the other's problem discussions. The common problems are 1) future need for a shuttle connecting the Hill with downtown, which is not an urgent matter, and 2) the concept of the Hill as a trial area for some traffic mitigation solutions that may also work well downtown later. Both of these problems could be addressed by periodic joint meetings of separate TMOs or through other coordinative mechanisms. As of January 1986, no definite action has been taken either to incorporate the existing TMO or to create separate TMOs for downtown and University Hill.

2. GREATER PRINCETON AREA

2.1 GEOGRAPHIC SETTING AND TRANSPORTATION ISSUES

Route 1 in central New Jersey has created a 20 mile development corridor between New Brunswick at the northwest end and Trenton at the southeast end. The northern half of Route 1 in this corridor passes through Middlesex County and borders Somerset County to the west. In the south, Route 1 lies in Mercer County. The principal city in the corridor is the Boro and Township of Princeton in northern Mercer County, with a 1980 population of about 26,000.* Princeton also serves as the western terminus of a transverse corridor running 10 miles east along County Route 571 through East Windsor to Hightstown, where Route 571 meets the New Jersey Turnpike.

Figure 3 shows the main features of these two corridors in the 8 mile square area near Princeton where development is most intense. We will refer to this area for simplicity as the "Route 1 Corridor." Notice especially:

- The commuter rail service provided to the area by Amtrak and the New Jersey Transit station at Princeton Junction station, which is in West Windsor
- The proximity of Princeton University to downtown Princeton
- The location of two large mixed use developments, Forrestal Center and Carnegie Center, along Route 1, with a third (Princeton Meadows) in Plainsboro.

The Route 1 corridor is growing rapidly in both housing and commerce. About 11 million square feet of new office space and 24 thousand new housing units are expected by 1995. This will

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*In New Jersey, counties are divided wholly into incorporated municipalities, which may be designated as cities, boroughs, or townships. For example, the Boro of Princeton (1980 population 12,000) is surrounded by the Township of Princeton (population 13,700).

produce growths of 78% in from current employment levels and 62% from the present number of housing units. Though much of the area now has a rural character, the planned growth will fill in many of the available development sites and will severely tax the highway network of the region.

The projected growth is attributed to several causes: the attactiveness and rural character of the area; its proximity to Princeton University as a cultural, intellectual, and technical resource center; and the national trend towards suburbanization, first of housing and then of commercial and industrial development. Such development seeks ease of access to the suburban work force, often emphasizing the preferred residential locations of executives in the new or transplanted firms.

Good rail and highway service are also attractive features of the Route 1 corridor, though it is not well served by public transit and automobile reliance is extremely high. There are presently only four local transit routes interconnecting the corridor, each run by a different operator:

- New Jersey Transit (NJ Transit) runs its M line from Princeton to Carnegie Center and Princeton Junction, then down to Quaker Ridge Mall, a shopping center about five miles south of Princeton. Fare is $.75 to $1.00 within Mercer County.

- The Dinky, a rail shuttle between Princeton Junction and downtown Princeton with hourly service, also operated by New Jersey Transit.

- Princeton Area Transport, a private company, provides hourly service during the day between downtown Princeton, the university, Route 1 north to Forrestal Center, Route 1 south about 3 miles to the Treadway Inn, and Carnegie Center. Service to Princeton Junction has been requested, but is opposed by New Jersey Transit as duplicative of their Dinky shuttle. The fares are $.80 to $2.50, depending on distance.

- Suburban Transit, a larger private operator, specializing in commuter bus service to New York City, runs a line from Princeton Junction to downtown West Windsor, Hightstown, East Windsor, and north to New York (they also have a line running north out of Trenton on Route 27, which passes through downtown Princeton enroute to New York). Fares vary with distance.

Some problems associated with the current transportation mix that are serious now and are bound to get worse as development continues are:

- Severe daily parking shortages are experienced in the business and shopping area of downtown Princeton, along with increasing parking needs for commuters at Princeton Junction station (exacerbated by plans for reconstruction of the station, which will temporarily restrict parking below current demand levels).

- Private corporate shuttle buses and vans were beginning to evolve in place of public transit service, with potential duplication and no means for coordination of service.

- Job opportunities for minority and low-income residents of the older cities and suburbs are limited by the difficulty of nonauto access to new offices, hotels, and other employment centers in the corridor.

- The continued high use of single-occupant autos for commuting creates traffic delays during the peak period both on Routes 1 and 571.

Resolution of these problems is beyond the limited transportation planning capabilities of the three counties and several municipalities of the region. Their transportation staffs are mainly concerned with building and maintaining local streets and roads, and with avoiding new roads and excessive traffic through their jurisdictions. There is some interest in, but no funding for, long-range or regional transportation planning. Major jurisdictions do have representation on the Route 1 Advisory Committee, led by the New Jersey Department of Transportation (NJDOT). However, NJDOT's planning efforts are focused narrowly on improvement and widening of Route 1, from four to six lanes, and upgrading from arterial to freeway standards through the region. (No HOV lanes or access ramps are yet included in plans for the route, though they are under consideration.) Even with the improvements, traffic projections show Route 1 reaching severe levels of commute period congestion by 1992. Moreover, the 1983 development projections used by NJDOT for planning the Route 1 improvements are now far below current development plans

for the corridor, which are still growing. The needs for added local roads and better public transportation are recognized, but these are not within NJDOT's jurisdiction. Finally, the long construction period would bring serious disruptions to Route 1 traffic.

There are many important corporations and institutions located in the Route 1 corridor. These include Princeton University, Forrestal Center (owned by Princeton University), Carnegie Center, Princeton Meadows, RCA, McGraw Hill, Dow Jones, Squibb, FMC, and Educational Testing Service (ETS). The three centers differ considerably in their size and emphasis:

- Forrestal Center is a 1,600-acre development with adjoining private airport and research center operated by Princeton University. Private sites are on large individual plots of land, beautifully landscaped to create a low-density, park-like effect. The Scanticon Hotel is located at the center. Present employment is about 6,500 persons (including 1,500 at the research center), with an additional 6,300 expected in 1985.

- Carnegie Center is a 520-acre private development built in clusters of standard buildings grouped around a common courtyard and sharing the adjoining parking areas. A Hyatt Regency hotel is located at the center. Present employment is about 1,800 persons, with ultimate employment of 12,000 to 15,000 in 10 years.

- Princeton Meadows is a 937-acre mixed use development of Linpro (formerly Lincoln Properties) that includes shopping, condominiums, detached housing, recreational, and business areas. Present residential population is around 7,000, employment is about 300 persons, and additional commercial space is planned.

The corporations of the area have a strong tradition of constructive involvement in community affairs and support for improved transportation. These aims are expressed in part through membership in the Middlesex Somerset Mercer Regional Study Council (MSM), an independent, nonprofit regional planning and research organization located just outside Princeton. MSM also has local government members and ties with state and

regional public agencies. MSM was created in 1968 and therefore claims to have been a "public-private partnership" long before the term was coined.

MSM is committed to coordination and improvement of transportation facilities and services in the Route 1 corridor. Policy guidance for its transportation activities comes from a Transportation Committee composed of MSM Board members and other persons with interests in regional transportation issues.

2.2 TRANSPORTATION PROJECT AIMS AND SCHEDULE

In September 1983, MSM submitted through New Jersey DOT a request to UMTA for a challenge grant of $25,000 in each of two consecutive years, to supplement expected corporate contributions of about twice that amount. The project had four immediate aims or tasks:

1. Feasibility studies and possible inauguration of privately financed shuttle bus system for commuters to downtown Princeton and other activity centers in the Route 1 corridor.

2. Feasibility analysis, operator selection, and implementation of subscription commuter bus service between residential areas, transit nodes, and employment centers.

3. Assessment of present employee van and carpooling programs in the corridor, followed by a) preparation of specifications, resources, and a financing plan for improvement of the program, and b) development of the employer network necessary for a successful employee ridesharing program.

4. Continued representation of local interests for the Route 1 Corridor Project, including facilitation of financing and implementation of recommendations from the project once the study phase was completed.

In addition, MSM proposed creation of a separate transportation management association (TMA) that could pursue these and related transportation activities with more vigor, corporate participation, and continuity than could MSM's Transportation

Committee. The TMA would fill a vacuum for regional transportation planning and facilitation activities in the area, and could pursue these activities as permitted by its time and budget, complementing the project aims outlined above. Examples of TMA aims proposed at this stage follow.

1. Assistance to local governments in negotiating transportation agreements with individual developers.

2. Promoting municipal and county-level initiatives to amend local land use regulations to require developers and major employer to participate in the provision of collective transportation.

3. Coordination of the transportation services and programs of social service agencies.

4. Service to major activity centers and large employers to launch and operate special transportation services for tenants, employees, and visitors (shuttle and commute buses and vans, airport limousines, etc.)

5. Development of a regionwide "travel facilitation service" patterned after that of the Montgomery County Paratransit Association (MCPA) in Pennsylvania. Member taxi companies of MCPA offer several types of collective transportation such as share-ride taxis, vanpools, and subscription buses, and MCPA evaluates client transportation needs for the best package of services and vehicles.

Selection of the four <u>immediate</u> tasks for the project (see earlier list) was based both on meeting the area's most urgent transportation needs and attempting to complete some highly specific and tangible work in order to establish the credentials and achievements of the new TMA. Figure 4 shows the progress schedule for completion of the four tasks. The project got under way as a contract between MSM and NJ DOT, the UMTA grant recipient, in mid-March 1984. The first full quarter of activity was April through June 1984.

2.3 FORM AND HISTORY OF TMA

Work on establishment of the TMA began in the first quarter of the project with development of proposed organizational guidelines, budgets, and possible formulas for membership fees. Membership fee structures for Tysons Transportation Association (No. Virginia) and Metropool (Stamford, CT) were compared and a modified plan based on elements of both was proposed. TMA Board of Trustees membership was suggested for MSM, corporations, developers, the chamber of commerce, Princeton University, and a citizen representative. Based on these proposals and the suggested TMA activities described earlier, the Executive Committee of MSM's Board of Directors voted on June 25, 1984 to proceed with organization and incorporation of the TMA as a private nonprofit corporation under Section 501(c)(3) of the IRS code--which required demonstration of a "charitable public purpose" for the TMA. Staff was also authorized to investigate with NJDOT the availability of FHWA financial support for the TMA, possibly including regional FAUS pass-through funds.

By September, proposed by-laws for the association and candidates for the board of trustees had been identified. Presentations had been made to Merril Lynch, the West Windsor Planning Board, the Hyatt Regency of Princeton, Linpro, FMC, and the Princeton Transportation Committee (an informal group of downtown developers attempting to meet TSM requirements of the Boro of Princeton) regarding the proposed TMA and its possible services. Candidate board members were approached shortly thereafter, a certificate of incorporation was drafted, and the 14-member board held its first meeting on December 11, 1984. The main events at this meeting were:

- Agreement to call the organization at the Greater Princeton Transportation Management Association and to meet quarterly.
- Adoption of the by-laws, after approval of several minor revisions to the draft.

- Election of a slate of officers, and appointment of an executive committee consisting of the four officers (president, vice president, secretary, and treasurer) plus a citizen's representative and an MSM representative.

- Approval of the certificate of incorporation, after slight amendments.

- Approval of the TMA membership scope to include corporations, developers, organizations, institutions, and individuals, and to exclude governmental entities.

- Approval of continued voluntary fundraising efforts for 1985, with continued study both of an appropriate membership fee schedule and the possibility of a fee-for-service concept that would permit some members to consider their fees as a business expense rather than a charitable contribution.

- Approval of staffing the TMA by transfer of transportation professionals from the MSM.

- Suggested initiation of a quarterly newsletter to TMA members.

- Approval of the following five priority projects for 1985 (in addition to other ongoing work):

  - Technical assistance to West Windsor for investigation of three alternative parking solutions for the Princeton Junction rail station: ridesharing, subscription bus, and fringe parking with shuttle service.

  - Assistance to New Jersey Transit in developing prototype service linking Princeton Junction train station to area employers.

  - Further marketing to Princeton employers of the project to provide shuttle bus service between Jadwin Gym parking lot (at the southeast corner of Princeton University) and downtown Princeton, to alleviate the parking problem in downtown Princeton.

  - Continuation of work under way to survey major Mercer and Middlesex County employers, in order to obtain data on current employment and shifts, working hours, employee zip code locations, and the potential for transit, ridesharing, and time scheduling programs.

  - Working cooperatively with NJDOT to market ridesharing in the Route 1 corridor, while exploring the potential for a third party provider of vanpooling services.

At a follow-up meeting on January 29, 1985, the Board completed its organizational tasks by approving the following matters:

- A memorandum of understanding between MSM and the TMA covering the pass-through of federal grant monies, shared office space and services, and other matters.
- Addition of advisory ex-officio members to the TMA, when mutually advantageous. The first candidate was a local Princeton resident who was also a member of New Jersey Transit's Board of Directors.
- The 1985 operating budget for the TMA, totalling $111,075, with the following income sources:

- Due from MSM and NJDOT	$21,415
- UMTA challenge grant	25,000
- NJ Transit marketing grant	10,000
- Membership fees	54,000

Appendix C contains copies of the certificate of incorporation and by-laws for the Greater Princeton TMA, plus the memorandum of understanding between MSM and the TMA. Beginning in 1986, the Board is meeting every other month on the fourth Tuesday. The TMA's calendar year 1986 operating budget is $108,000, $3,000 lower than 1985, based on about the same level of services provided in 1985 and a more precise estimate of their cost.

The TMA professional staff is equivalent to 1 1/2 persons, including a part-time executive director (26 hours/week), a part-time associate director (32 hours/week), and a part-time student intern. Secretarial and administrative services, equivalent to about 3/4 person, are contracted from MSM.

2.4 PROJECT RESULTS AND TMA EVOLUTION THROUGH JANUARY 1986

The Greater Princeton TMA has continued through 1985 the tradition of vigorous and often experimental activity that the MSM transportation staff began with the UMTA challenge grant. It proved to be a highly useful and adaptable structure for managing

and extending the regional transportation planning activities that were initiated by MSM. We next summarize the progress and status of those activities, beginning with the four that were identified in the challenge grant request.

Shuttle Bus System

Considerable planning effort between April and June 1984 went into defining shuttle bus routes that would solve some specific transportation problems. The three principal candidates are summarized below (please refer to Figure 3 for location details):

- Route A would provide peak-period service from Princeton University's Jadwin Gym Lot, at the southeast corner of the campus, to downtown Princeton and return. Its purpose is to relieve a downtown parking shortage by attractng downtown employees to the site. The University will donate up to 400 spaces at the lot for this purpose if MSM takes care of issuing permits (at $14/month), security, insurance, and snow removal. A break-even patronage would be 200 cars.

  Route distance for the total bus loop is 3.2 miles, or about 1.6 miles each way. Both headways and one-way travel times are estimated at ten minutes. Carpools from the lot into town will also be encouraged by arranging for discounted downtown parking for the one driver out of four who continues downtown, but the attractiveness of that plan is uncertain.

- Route B would provide commute period service from Princeton Junction, north on Route 1 to Independence Way at the northern end of Forrestal Center. One-way distance is 7.2 miles, trip time is 25 minutes, and headways would be 40 minutes.

- Route C, which provides mid-day service between downtown Princeton, Princeton Junction, and College Drive, near the northern end of Forrestal Center. Route distance is 9.9 miles and headways are 30 minutes.

Support for Route A came from downtown merchants and firms who would be the main beneficiaries of the additional parking spaces freed up in downtown Princeton. The needs for Routes B and C arise from the rapid development of Forrestal and Carnegie

Centers, and especially from requests by their employers for commute service to Princeton Junction. However, Forrestal has widely spaced individual buildings, so bus service within the center would likely be relatively slow and costly. In contrast, service direct to the clusters at Carnegie Center would require only one stop each.

Further planning of the shuttle routes is on hold until assurance of financial support is obtained from the entities served. Other approaches may be more economical, particularly subscription bus service in place of Route B (see next item). In the meantime, Carnegie Center on its own is testing the market for commute shuttle service to Princeton Junction Station through running temporary service with vans from the Hyatt Regency nearby. The courtesy vans are underutilized by the hotel during peak commute periods.

Subscription Commuter Bus Service

The TMA is actively researching both company needs for subscription bus service and matching the needed service with prospective operators. Merrill Lynch, McGraw Hill, and RCA have each expressed interest so far (RCA presently runs their own service).

A proposal for low-cost, limited subscription bus service between employers and Princeton Junction station is also being developed by NJ Transit. The low cost is feasible due to some cross-subsidy from NJ Transit's rail operation, which would benefit from increased ridership with availability of the subscription service.

NJ Transit has contracted with the TMA for transit marketing services, in the form of corporate promotion and outreach, for the subscription bus. The TMA will design and produce marketing materials and will serve as NJ Transit's liaison with employers for purposes of the service.

Merrill Lynch is already interested in exploring such service for their 1,500 employees. The TMA is preparing a presentation to Merrill Lynch executives, to be followed by employee presentations and probably by a survey of employees to determine their interest in carpooling, the subscription bus service, or other commute alternatives.

Employee Van and Carpooling

Ridesharing is still a relatively low-key effort with the TMA, principally due to low interest among its supporters and other employers in the area. New Jersey DOT has had an on-and-off ridesharing promotional effort among large employers throughout the state that has not made any noticeable headway in the Princeton area. The MSM ridesharing program is coordinated with that of New Jersey DOT.

There is some local employee vanpooling through promotions by Vanpool of New Jersey, located in Lawrence Township to the south. They are a third party provider to employers. A second and very successful vanpooling firm, People Ridesharing, headquartered in Newark, also wants to enter the local market.

In the fall of 1985, the TMA invited representatives of both vanpooling firms to propose organizing vanpools for groups of interested employees at Educational Testing Service (ETS). The TMA pre-organized interested ETS employees into tentative vanpools and carpools, pending a temporary move by ETS to a site 30 miles west. The idea was to possibly get better vanpool prices and services from competition of the two firms than by preselecting one firm and giving it a monopoly. Presentations were made to a total of 60 interested ETS employees.

The results were disappointing. Few of the interested employees actually formed carpools, and only two vanpools were started. One problem appeared to simply be inertia, and another was higher costs for the vanpools than was anticipated by employees. A second visit to ETS by TMA staff, in January 1986, produced no new interest in ridesharing.

Route 1 Corridor Project

MSM was active in contributing to the study group for NJDOT's Route 1 Corridor Project through publication and review of the first draft planning document in the fall of 1984. The study group is inactive now, while waiting for NJDOT to complete a more detailed plan for expansion and improvement of Route 1. At that time, MSM rather than the TMA will resume working with the study group because of its continuing nature. The TMA will concentrate on projects with more specific time schedules and outcomes, such as the others mentioned above and below.

Employer Survey

A survey was sent to the 409 employers of over 50 persons in the area in January 1985. Its purpose was to obtain transit and ridesharing planning data on employee numbers and zip code locations, current transit use, working shift hours, and the employer's interest in further cooperation, including facilitating surveys of their own employees. New Jersey Transit contributed to the survey instrument and was also interested in the results. The survey was mailed by the Mercer County Private Industry Council (a trade association serving Mercer County industries), and elicited a 21% response.

The results of this survey have not been used much by the TMA, and if it is ever repeated, it would be in a greatly simplified format. The main responses of use have been indications from the employer that 1) they would welcome further information from the TMA about employee commute alternatives and 2) they would permit the conduct of employee surveys to learn more about their commuting needs. Follow-ups with employee surveys to date have revealed frequent differences between employer and employee perceptions of transportation problems.

Flex-time

The TMA has received assistance from Seattle-King County Commuter Pool, through UMTA's Public Transportation Network, for

planning a flex-time educational and promotional program. They will make use of materials developed by Commuter Pool, and are prepared to invest the considerable staff and calendar time that it usually takes to gain wide adoption of this concept. In 1985, flex-time was successfully marketed to the FMC Corporation, which proceeded with implementation of a flex-time program for its employees and is now a strong supporter of the approach.

Princeton Junction Parking Alternatives

TMA staff helped West Windsor identify alternatives to expanding the parking supply at Princeton Junction rail station. Options reviewed included subscription bus service from residential areas.

Transportation Alternatives Seminar

A conference and workshop sponsored by the New Jersey Departments of Transportation and Energy was hosted by FMC Corporation in June. Public and private sector speakers presented their first-hand experiences in ridesharing, transit service improvements, flex-time, and staggered working hours to 49 participants from interested local employers. Wider corporate interest in such activities is expected to result.

Forrestal Shuttle Analysis

The TMA has begun work with Forrestal Center on an interior shuttle to serve the Forrestal Village development, which includes retail and restaurant facilities. A survey of tenants was designed to determine support for the project. However, there has been a slowdown in the development schedule for Forrestal Village, so continuation of this work has been postponed until such time as prospective traffic to the Village would possibly warrant a shuttle.

Corporate Neighbor Sessions

In its role as promoter of cooperation among the area's employers, the TMA held the first of its "corporate neighbor sessions" in December 1985, between several employers in Lawrence Township. Their main purpose is to inspire interest and cooperation among nearby firms in developing and implementing their own TSM programs. The first participants were ETS, AT&T Technologies, Squibb, and Mobil Oil Co. Two of the participating employers have asked to hear a detailed presentation on employee ridesharing from the TMA, and three employers have asked the TMA to represent them in supporting local highway improvements.

Other Activities

TMA staff in its first year met personally with nearly all of its employer members, both to explain the TMA program and to learn about member transportation needs and interests. The meetings have been highly useful in gaining better employer recognition of the services available through the TMA.

Fundraising among TMA members is an associated staff activity, which went well in 1985 and is gradually getting more routine. One important step in this direction was solving the policy question of the extent to which TMA member contributions would be contingent on services received rather than based on square feet of floor area or the number of employees. The solution has been to:

- Assess annual member fees based on the criteria of floor space and employment.
- Charge members direct costs only for any services provided to them in excess of the usual--such as the meetings and arrangements for employee ridesharing at ETS, in which the TMA was acting much as an internal ridesharing coordinator.
- Charge nonmembers at service rates that include direct costs, overhead, and a fee.

The TMA is an active member of several regional or local transportation groups. These include the Mercer Advisory Committee that provides information to NJ Transit on transportation needs in the region, and the Transportation Task Group of a new "Regional Forum" created by MSM to develop agreement on a regional plan for the Central New Jersey corridor area.

Future Program Emphasis

Based on its experience through 1985, the Greater Princeton TMA expects to emphasize several activities in 1986 that appear to have both high acceptance from members and high payoffs. The first of these is the corporate neighbor sessions, which were just getting under way late in 1985 and drew a warm response from participants. The second is flex-time, which seems more effective and more acceptable to Princeton area employers as a traffic mitigation measure at present than ridesharing.

The third area of emphasis will be on marketing the subscription bus service proposed by NJ Transit, and the fourth will be the conduct or facilitation of employee surveys in the course of visiting employers to learn more about their transportation needs and interests. These two aims are closely related, because in ascertaining an employer's interest in subscription bus service, the TMA feels that it is wise to obtain the whole range of responses from employers on their commute problems and preferences. Company management rarely has this information, and the only way to find out for sure is to ask the employees.

Finally, the TMA is interested in sharing its experience in starting and refining a transportation management program in a small town and rural growth area setting with other communities that may wish to do so. It welcomes inquiries, and would also be interested in an educational role under some sponsorship such as UMTA's Public Transportation Network (which is expected to continue as the Private/Public Transportation Network).

3. CENTRAL ATLANTA

3.1 GEOGRAPHIC SETTING AND TRANSPORTATION ISSUES

The central business district (CBD) of downtown Atlanta comprises the two square miles within the dashed pentagon in the map shown in Figure 5. This area is the hub of a seven-county region with a population of 1.8 million persons in 1980. Population is expected to grow 25% by 1990. Downtown employment of 94 thousand persons in 1980 is expected to grow to 153 thousand by 1990, a 63% increase.

The convention and tourism industry plays a major and growing role in downtown Atlanta employment and travel patterns. The city is the third most popular U.S. convention site, and hosted about 1.2 million persons at 1,200 conventions in 1982. Convention facilities include the Georgia World Congress Center, shown at the left of Figure 5, which will have about 650,000 square feet of meeting and exhibit space after completion of a current expansion. The Atlanta Market Center (top center in Figure 5) and the Civic Center (top right) will add nearly another 400,000 square feet. The area's 27 hotels and motels, with about 10,000 rooms, are mainly grouped in the northeastern quadrent of the CBD.

With the anticipated redevelopment of Underground Atlanta, a recreational and historic center near the south corner of the CBD, by 1986, central Atlanta will have a third major traffic generating node, forming a triangle through its connections to the World Trade Center and the hotel area. The state capitol, just south of Underground Atlanta, adds to the travel demand in this part of the CBD.

Moderate levels of street congestion already prevail in central Atlanta during the day, and congestion is expected to increase significantly with further downtown employment expansion. MARTA's bus and rail service mainly handles radial trips to and from the CBD. Current public CBD circulation

service now depends mainly on taxis and some private tour bus operators that are often engaged by convention managers for shuttling large groups of delegates between hotels and convention sites. These services are strongly believed by hotel operators and convention agencies to be less than adequate in both quality of service and capacity for handling visitor circulation needs in the CBD.

The City of Atlanta and the Metropolitan Atlanta Rapid Transit Authority (MARTA), the regional transit operator, have sought for over ten years to create circulation improvements for the CBD that would improve the mobility of downtown employees and visitors while decreasing the number of vehicles on the streets. Studies of a prospective downtown people mover were conducted between 1975 and 1981, but expected demand was not sufficient to justify the high cost of such a capital-intensive system.

In October 1979, MARTA inaugurated downtown loop bus service on two routes, at their regular 25 fare, using conventional buses and special orange or blue "Loopride" bus stop signs. The routes connected the hotel district, state capitol, and World Congress Center, travelling in opposite directions on the same or neighboring streets. The service was on eight minute headways, reduced to four minutes during weekday rush hours and increased to 15 minutes on Sundays.

The MARTA loop bus experiment lasted 15 months, and was terminated during general cutbacks of relatively high-cost, low-patronage services in order to avoid a fare increase. Patronage on the lines had been building up slowly, but the routes were relatively circuitous and not easily understood by visitors to the city. Private sector donations towards the MARTA loop service totalled $85,000.

Interest in downtown circulation service was revived in 1983 when the Rouse Company, the prospective redevelopers of Underground Atlanta, included as one of the essential conditions for the economic viability of that redevelopment a downtown

circulation system offering good bus connections with the hotel district. Support for a city commitment to study and devise such service came from Central Atlanta Progress (CAP), the city's downtown executive organization and a longtime advocate of the concept.

3.2 TRANSPORTATION PROJECT AIMS

In August 1983, CAP submitted a $50,000 private sector initiative grant application to UMTA to conduct the evaluation necessary to establish a loop bus system within Atlanta's CBD. CAP's application was preceded by about a year of informal discussions with UMTA, culminating in a verbal invitation and agreement to submit the application at that time.

UMTA approval of the requested grant came in October 1983. CAP's first task was to negotiate a pass-through agreement for the grant with the Atlanta Regional Commission (ARC). This posed no problems, and CAP was designated the subgrantee by December. The agreement was probably expedited by ARC's integrated grant approach, under which such new grants are added work elements in a continuing program. ARC's relatively light reporting requirements included a short monthly progress report and quarterly financial accounting.

CAP was responsible for project management through a team of consultants assembled to complete different segments of the work. An ambitious study program was outlined, with detailed specifications for an upbeat, convenient, simple, attractive, and preferably self-financing and privately operated system. Study objectives included:

- Updating and expanding ridership demand data
- Evaluating and recommending routes, service characteristics, and distinctive vehicles
- Evaluating and recommending traffic system improvements needed on the recommended routes
- Developing a marketing and sales program for the system aimed at a variety of market segments (especially

convention visitors and downtown employees, and potentially including service to fringe CBD parking facilities as well)

- Exploring and recommending management, ownership, and financing options, either public, private, or in combination, to achieve a subsidy-free operation

- Establishing an implementation schedule, financial plan, and organizational capacity to provide an operational system by the third quarter of 1985 -- well ahead of the reopening schedule for Underground Atlanta in 1986.

Project work at CAP began in October 1983 with organizing participants, networking with other cities engaged in similar projects, and engaging consultants. Figure 6 shows the project's Task Force membership, and Figure 7 shows the Technical Advisory Committee (TAC) membership. Note the broad public and private representation on each group, and the higher-level participation on the Task Force, which was viewed as the decision-making body for the study as well as a source of advocates for system implementation. Actual attendees at the monthly TAC meeting were often designees of the appointed members, generally specialists in local transportation or convention planning, from the same organizations.

Figure 8 shows the original timetable for the project. In January, 1984 the schedule was shortened to complete the consultants' work by the end of 1984, as shown in Figure 9.

There were two classes of consultants, some on fixed fee contracts and some "pro bono" consultants who were only reimbursed for out-of-pocket expenses. Those under fixed fee contracts were Post, Buckley, Schuh & Jernigan of Columbia, South Carolina, in association with Ewell W. Finley and Partners of Atlanta, and Dr. Catherine L. Ross of Georgia Tech in Atlanta. Post, Buckley responded to a request for proposal issued by CAP in December 1983, was selected to perform the transportation engineering, and began work late in January, 1984. Dr. Ross was retained for technical advice and to assist in report preparation.

The pro bono consultants, all of Atlanta, were Deloitte, Haskins and Sells, Inc. on financial and management issues; Tucker Wayne & Company on marketing startegy; and Smith, Gambrell, and Russell as legal counsel. The UMTA grant has been matched by about $77,000 of these in-kind services from CAP and their members, who were the pro bono consultants for the study. Since only about $44,000 of the UMTA grant was spent, the ratio of private to public support for the project has been about 1.7 to 1.

3.3 FORM AND HISTORY OF TMO

Central Atlanta Progress was created in 1941 as a non-profit business corporation under Section 501(c)(4) of the Internal Revenue Code. For some years now, CAP has held its professional staff level to seven persons, by avoiding operating or other commitments that would require more staff. Any excess short-term workloads are contracted out. The breadth of CAP's interests are indicated by the following coverage of its 1983 report on downtown Atlanta:

- Urban design plans
- Transportation planning, including interstate, downtown street, MARTA, and airport improvements
- Major construction and renovation projects in and near downtown
- Revitalization of the downtown area, elmphasizing Underground Atlanta plans
- Intown neighborhood housing.

For purposes of this project, the CAP acted very much as a private sector transportation management organization. A majority of both Task Force and TAC members were from the public sector, representing the City of Atlanta and local transportation agencies, but private sector members were from the executive levels of important community organizations including the Atlanta Convention & Visitors Bureau, the Rouse Company, Georgia Power

Company, and Central Atlanta Progress. Together the Task Force and TAC, with CAP staff leadership, proved to be highly effective forums for monitoring the study, reviewing its results, and choosing a recommended system configuration from among those developed by the consultants. The same study format has been successfully employed by CAP for other purposes.

The Downtown Bus Loop Task Force was also known as the Policy Board, to indicate its function in the study process. The senior nature of this group made it so difficult to obtain quorums for the quarterly meetings that individual meetings with members were used instead to supplement the quarterly meetings. For this purpose, the decision agenda specified as Task 9 of the study proved to be a useful tool.

The decision agenda was a separately packaged interim report that summarized the progress of the study according to six areas of concentration: overview, marketing, routes, fares, management alternatives, and vehicle specifications. The agenda was prepared as a folder in that sequence, with decision statements for response on the right of each sheet and supporting data and graphics on the left.

Once the preferences of the Policy Board had been indicated through the mechanism of the decision agenda, in the fall of 1984, the TAC and consultant team refined their recommendations in subsequent meetings. Final recommendations were presented in summary by consultants and the CAP project manager at a joint meeting of the CAP Board of Directors and MARTA officials to which the TAC and Policy Board were also invited.

CAP has used this same general study format successfully on previous projects. The approach is notable both for the wide participation in study activities and decisions by the private sector, and by the different organizational levels of participation engendered.

3.4 PROJECT RESULTS AND TMO EVOLUTION THROUGH JANUARY 1986

The study recommendations and rationale are provided in great detail in a six-volume report produced by the consultants in March 1985 (Reference 5). Figure 10, from the transportation engineering report, shows the two-route alternative that was finally selected. The primary route runs between the hotel district and Underground Atlanta on Peachtree Street with a second loop connecting the hotel district with the World Congress Center along International Boulevard. There was insufficient demand between the World Congress Center and Underground Atlanta to warrant that leg of the system.

Table 1 summarizes the recommended system operating characteristics, while Table 2 shows similar information for a number of similar systems in other cities. Table 3 gives the estimated annual ridership of each route by CBD employees and visitors at a fare of 60¢ per trip with transfer privileges to and from MARTA. Capital costs of the system are estimated at $540 to $600 thousand, while annual operating costs are estimated according to MARTA experience at $513 thousand.

At the recommended fare of $1 per trip, patronage would decline somewhat from the levels shown in Table 3. Reduced patronage from a $1 bus fare was estimated (through a computer fare and patronage model) to result mostly among downtown employees, as convention delegates would not be as sensitive to the fare level. The major considerations in going to a $1 fare were:

- The bus system tended to get overutilized at a $.60 fare by downtown employees at key points and time periods, leaving inadequate spaces for visitors.
- A $1 fare was more profitable, with the system more than breaking even on operating costs in the first year of operation.
- At a $1 fare, transfers to other MARTA routes would still be feasible (or delegates could use a one-week, prepaid pass on all routes, which has already become a popular option with large conventions that overrun the capacity of downtown hotels).

TABLE 1. RECOMMENDED SYSTEM OPERATING CHARACTERISTICS

Operating Characteristic	Peachtree Route		International Route	
	Weekdays	Weekends and Holidays	Weekdays	Weekends and Holidays
Total vehicles	3	3	3	3
Peak vehicles	2	1	2	1
Round trip (miles)	1.7	1.7	2.0	2.0
Rount trip (min.)	16.6	16.6	20.0	20.0
Hours of operation	9am-2am	10am-2am	7am-7pm	9am-7pm
Days of operation	255	111	255	111
Headways (min.)	10	20	10	20
Number of bus stops	8	8	9	9
Annual rev. miles	44,270	9,060	36,720	6,770
Annual deadhead miles*	2,550	550	2,550	555
Annual rev. hours	8,670	1,776	6,120	1,110
Annual deadhead hours*	255	55	255	55

*Assumes maintenance facility is approximately 2.5 miles from downtown.

SOURCE: Reference 5, Volume II.

TABLE 2. CHARACTERISTICS OF COMPARABLE DOWNTOWN CIRCULATOR BUS SYSTEMS

CAP Bus Study

City	Beginning Date	Number of Routes	Total Route Miles	Service Area Employment	Hours of Operation	Regular Fare	Average Weekday Headways	Vehicles Operated in Peak Hour	Peak Hour Ridership	Weekday Riders	Annual Operating Cost	Passengers Per Hour (Average)
Birmingham	Feb.,79	2	5.9 mi.	35,000-40,000	10-4 M-S	10¢	9 min.	6	250	1100	$160,000	31
Boulder	N/A	1	7.8 mi.	N/A	9-3:30 M-F	free	15. min.	3	N/A	600	$94,000	31
Dallas	N/A	1	2.6 mi.	65,773	6:30-6:30	10¢	6 min.	5	304	2500	N/A	42
Denver	N/A	4	7 mi.	N/A	9-4:30 7:45-4;6-10	free	17 min.	10	405	2080	$ 93,400	30
Houston	1975	4(2)[1]	7.7 mi.	46,500	7-9,9-4,4-6	10¢	5 min.	13	N/A	5000	$306,000	43
Kansas City	July, 72	2	5.6 mi.	$1,428	7-5	10¢	8 min.	6	375	2100	$225,000	35
Los Angeles	Oct., 71	1[2]	8.4 mi.	200,000	7-6:30 9-4 Sat.	15¢	5 min.	14	850	4500	$1,299,000	44
Milwaukee	July, 75	1	3.2 mi.	N/A	9:30-4	10¢	6 min.	7	N/A	2800	$101,560	66
Minneapolis	1971	1	2.4 mi.	100,000	7-6:15 9-6	10¢	9 min.	N/A	N/A	1800[3]	$190,000	54
St. Louis	1975	2	5 mi.	100,000	11-2	10¢	5 min.	5	400	800-1000	$173,000	60
Washington, D.C.	1902	1	7 mi.	120,000	10-3:30	10¢-25¢	6 min.	12	1200	2500-3000	$346,000	41
San Antonio	N/A	1	1.8 mi.	29,403	9-6:30 M-S	free	5 min.	5	860	5600	N/A	120

[1] Two of any one time of the day.

[2] Two routes were recently combined to form one long route.

[3] Competing 10¢ buses following same route

N/A Not Available

SOURCE: Transportation Systems Center, U.S. DOT, "DPM: Planning for Downtown People Movers," April, 1979 (Draft)

TABLE 3. ESTIMATED ANNUAL RIDERSHIP

Route	Ridership Classifications	Annual Ridership
Peachtree	CBD Employees	306,700
	Convention/Out-of-Town Visitors	335,300
		642,000
International	CBD Employees	26,600
	Convention/Out-of-Town Visitors	242,200
		268,800
TOTAL SYSTEM		910,800

Other important study recommendations were for:

- An active marketing program, emphasizing 1) high quality, convenient service, 2) pre-sales of tickets to conventions, 3) validation of transit tickets by Underground Atlanta, and 4) eventual expansion of the downtown market with charter service to locations in and outside the CBD

- Naming the service "Peachtree Streak", with an appropriate art deco logo, to provide a touch of whimsy and instant name recognition (since Peachtree Street is well known)

- Utilization of heavy-duty minibuses 25' to 30' in length with plush perimeter seating and extra-large windows for visibility

- Installation of selected TSM measures, illustrated in Figure 11, to faciliate bus movement along the loop routes

- Preferrably, system operation by MARTA if they are agreeable, and otherwise through contract with a private bus operator.

We conclude with a brief chronological account at key months of the year-long study process by which these recommendations were developed and debated, followed by another year of minor refinements and gradual movement of MARTA towards accepting responsibility for the system.

March 1984

The main TAC agenda items in March were initial interview results with hotel and convention representatives by Post, Buckley and plans for subsequent surveys of conventioners to determine their travel patterns and entertainment expectations. The project was on schedule and CAP expected the design and evaluation of the loop bus system to be completed by the end of 1984, with organization, testing, and de-bugging of the system in 1985 and full operations by the opening of Underground Atlanta in April 1986.

May 1984

April surveys of two sets of convention delegates produced useful information about their travel characteristics and preferences while in Atlanta. For example, most delegates stay at downtown hotels; about a third leave the World Congress Center (WCC) at noon for a meal or shopping; and about half stay after the convention for the same reason. The average fare that would be paid by one convention for the shuttle bus service was $1.25/ride, and was somewhat less than a dollar by the second convention. Travel between the hotels and the WCC currently depends on personal auto, walking, shuttle, bus, taxi, rental cars, and use of MARTA.

The main study effort in May was comparison of the six alternative routes developed by the consultant team. Discussion of the alternatives at the Technical Advisory Committee meeting of May 10 enabled selection of Alternative 3* for further refinement because of its good coverage and low projected deficit. Other routes had higher costs, potential bottlenecking problems, or inadequate coverage. The City of Atlanta agreed to cooperate in plans to facilitate bus movements and reduce impediments to free traffic flow on the selected route. The project appeared to be on schedule and moving rapidly.

July 1984

The downtown loop study was focused on several key issues:

- The management and financing scenarios for the system, of which the following five scenarios were still under consideration:

    1. A CAP owned and operated system

---

*Alternative 3 provides direct service between the hotel district and Underground Atlanta from 10 am to 12 pm on a 2.2 mile loop route plus 8 am to 12 pm service on a 3.4 mile loop from the hotel district to the WCC to Underground Atlanta and return. Each loop has minimal diversions and 10-minute headways.

2. CAP contracts with MARTA

3. CAP contracts with a private organization to operate system with vehicles owned by CAP

4. CAP contracts with private organization that owns the vehicles

5. MARTA owns and operates the system.

None of these options involved a projected local subsidy, though MARTA operation would reduce the funds available for other MARTA service. Operational self-sufficiency was a strong aim for the system. Pre-selling the service to hotels was one step toward this aim that was to be investigated.

- The type of vehicles, of which ten types had been investigated. A high quality and appearance of vehicles was desired.

- The traffic regulations and controls along the route, which needed to facilitate necessary turns and stops for system vehicles without unduly penalizing other traffic.

The theme that was being considered by the Rouse Company for Underground Atlanta was also of interest but was not yet defined beyond the observation that the area clearly had Victorian character. There was also a study underway to develop a new theme for the City of Atlanta that would probably be oriented to the future and to 20th/21st century images.

Finally, a shuttle bus service to proposed satellite parking facilities for downtown employees was coming up for study. The financial feasibility of such a system and its relation to the downtown loop system needed to be defined and incorporated in the management and financing options.

September 1984

The downtown bus loop study reached several significant decisions and some tentative ones. Two separate routes were chosen, one between the hotel district and Underground Atlanta and one between the hotel district and the convention center, since the third leg of the triangle (between the convention

center and Underground Atlanta) did not show enough patronage to justify its cost. Discussions were going on with private bus operators about their interest in bidding for management of the system, after some difficulty in establishing contact with them.

Study results showed a slim operating profitability to the service. However, the Policy Board encouraged consideration of public operation, both to stabilize its long-term management and to avoid possible competition with the public operator, MARTA.

Vehicle selection proceeded to the point of leaning towards heavy-duty vehicles seating about 30 passengers, on the grounds that minibuses would be lucky to last three years in continuous service. And last but not least, a name-the-bus contest resulted in selection of a winner: "Peachtree Streak".

November 1984

The November 7 Technical Advisory Committee meeting produced progress reports on the logo for "Peachtree Streak", on regulatory problems (none if they stay within the city limits), on the dependence of patronage forecasts on development of Underground Atlanta (still high), on vehicle selection criteria (still emphasizing low floor structure and compatability with MARTA equipment), and on continued discussions with private providers and MARTA.

December 1984

The final meeting of the Central Atlanta Progress Policy Board on December 20 was presented with a slide show report by consultants. Recommendations were made that the "Peachtree Streak" system be initiated and operated wholly by MARTA, with a $1 fare. At this rate, which is $.40 above the citywide rate, the system would more than recover its operating costs. The system would operate on two loop routes, as described in the first paragraph for September, at ten minute headways, with four buses on the road during full service periods.

MARTA staff reacted favorably to the idea, but needed more time to prepare a formal response. There were two main issues:

- One issue was the acceptability of a different fare structure and nontransferability of tickets with the citywide bus system. Compared with MARTA's present strong policy of uniform fare and service levels, the "Streak" appeared to some as an elitist system, serving mainly visitors and conventioneers. (However, it would be usable by downtown employees up to its capacity -- which would soon be exceeded at a $.60 fare. Also, there are precedents in a few transit systems, such as those in Norfolk, VA and Seattle, WA, for providing specialized types of transit, including downtown circulation service. Such agencies view themselves as transportation providers rather than vehicle operators, and are willing to arrange for the most cost-effective public service that is needed. Moreover, there is a principle of economic equity which holds that unequal public services of various types can be provided so long as the extra cost of the service is met by the users of beneficiaries.)

- The other issue was the willingness of MARTA to allocate six new $95,000 buses to the system, which would reduce equipment available elsewhere. However, MARTA's new board chairman seemed favorably impressed with the proposed new service.

Since a quorum of the Policy Board was not present at the December meeting, they would be polled on the recommendations early in January, along with their stand on the question of extending the study period by two months in order to get written acceptance of the plan by MARTA. Board approval of these two requests was expected.

January-February 1985

Delay in receiving the final edited engineering report from the consultant was holding up MARTA review and approval of the proposal for their operation of the six-bus system. CAP expected the report shortly and foresaw no serious obstacles to MARTA's acceptance of the proposal, unless it was too alien to their mainstream operations and would be thought to siphon off funds and management skills for a small operation that could

prove to be a failure if not carefully managed and monitored. Should MARTA reject the idea, a new private operator has started business in Atlanta who was more interested in operating the system than other operators have been. However, no private operator wanted to compete with MARTA for the work because of their legal rights and financial power.

In spite of the predictions of a profitable bus service with $1 fares by the second year of operation, there were three strong reasons for preferring to go with MARTA. The first of these was MARTA's own interest and support so far. The other two were the prospective difficulty of organizing 1) an equitable financing arrangement to guarantee private operators the 10% profit margin that they require, and 2) an effective contracting, supervising, and auditing arrangement. In both cases, the in-between size of the bus operation was one of the problems.

The City of Atlanta has resisted creating assessment districts for financing such limited purposes, yet there were no private supporters willing to take the whole risk. Underground Atlanta, for example, would support the system financially if the hotels at another apex of the triangular route also contributed, but the hotels were not uniformly supportive. Other businesses would also be served along the route, but they would be even more difficult to obtain voluntary financial support from.

In regard to the need for supervision and auditing, CAP's staff was limited and they could only monitor the general performance of the system, not details of its service standards and performance. MARTA would not assume the contracting and monitoring task for a private bus operation, nor was any agency in the City of Atlanta interested or necessarily competent in that area.

For these reasons, MARTA emerged as the most politically, financially, and managerially suitable first candidate. If

they ultimately turned down the opportunity, CAP would reinstitute the search for a private arrangement.

In this connection, some other cities have created or are studying downtown assessment districts that would levy a fee or tax dedicated to relieving downtown parking and/or traffic congestion problems. Assessment districts would implement parking management and traffic management techniques such as ridesharing promotion, transit shuttle, or transit circulation service for downtown employees and visitors. Several examples are those proposed in Berkeley and Irvine, California; San Francisco's transit impact development fee on new, enlarged, or converted buildings within the downtown; and the current transportation service fee on new development in Berkeley. Financing improved downtown traffic mitigation and circulation is expected to be a growing concern of many other cities in the near future.

March-April 1985

Copies of the consultant reports were received and distributed early in March. The schedule for completion of Underground Atlanta redevelopment by the Rouse company was set back to April 1988, with construction starting September 1985. Since the downtown loop bus service was timed for the reopening of Underground Atlanta (originally set for 1986), the beginning of system implementation was delayed by this new schedule.

One effect this time delay was expected to be the postponement of MARTA's decision to assume responsibility for the downtown loop service. CAP presented its recommendations to MARTA on April 11, and planned to wait several months before following up for an answer.

August 1985

CAP met with MARTA to respond to a MARTA request for assurance of local financial backing if the predicted profitability of the downtown bus loop does not materialize, which would leave MARTA with added operating deficits. The meeting resulted in CAP's agreement to act as a broker to invite the Atlanta Convention and Visitor's Bureau to offer free advertising for MARTA as an in-kind offset to any deficits that MARTA may incur through operation of the downtown bus loop.

MARTA staff were currently working with the Rouse Company and CAP on details of the bus line that would serve Underground Atlanta. For example, the prospective closure of Alabama Street through Underground Atlanta would probably cause the bus route to shift to adjoining Wall Street or Martin Luther King Drive. Underground Atlanta plans were expected to be final enough within a few weeks for completion of this process.

October 1985

The following revised schedule for Underground Atlanta was indicated by the Rouse Company.

- 6/86: Start construction on Underground Atlanta redevelopment.
- Late 87 or earlier: initiate the two downtown bus links.
- Early 88: Open Underground Atlanta.

Central Atlanta Progress sponsored a design charette in October on development of International Boulevard that included consideration of plans for the bus link on that route (Reference 6). Design charettes are an interdisciplinary workshop format used by the American Institute of Architects for complex design problems. In this case, participants included economists, urban planners, traffic and housing engineers, a pedestrian engineer, and a retail specialist. One

of the resulting recommendations for the bus link was to reconsider a more open, informal, festive vehicle. Consequently, both MARTA and CAP were reconsidering this concept, which was rejected earlier in the study in favor of standard transit buses that could be more easily maintained and, if necessary, operated elsewhere by MARTA.

January 1986

In a series of meetings between MARTA, CAP, and City of Atlanta staff, agreement was reached on utilizing Wall Street for the shuttle route serving Underground Atlanta. Detailed route decisions were complicated by planned street closures and other changes in traffic flow for the area. Though MARTA had not explicitly agreed to operate the shuttle system, their participation in these meetings seemed to CAP to indicate their willingness to do so if nothing unexpected occurred.

In the bus study, as in earlier transportation decisions, CAP has been playing much the role of a transportation management organization for downtown Atlanta. It has shown high proficiency and imagination in its approach to project management, especially with regard to effective involvement of public and private resources.

The next project CAP was undertaking was a large downtown transportation management study, budgeted at $162,500 in total, which nicely complemented the downtown bus study. Other participants were the Georgia Department of Transportation, Atlanta Regional Commission, and City of Atlanta. Though mainly concerned with traffic engineering improvements, the new study would also consider high occupancy vehicle (HOV) lanes on freeways serving downtown, the associated need for ridesharing promotion, and UMTA's new emphasis on privatization in public transportation.

APPENDIX A

ILLUSTRATIONS

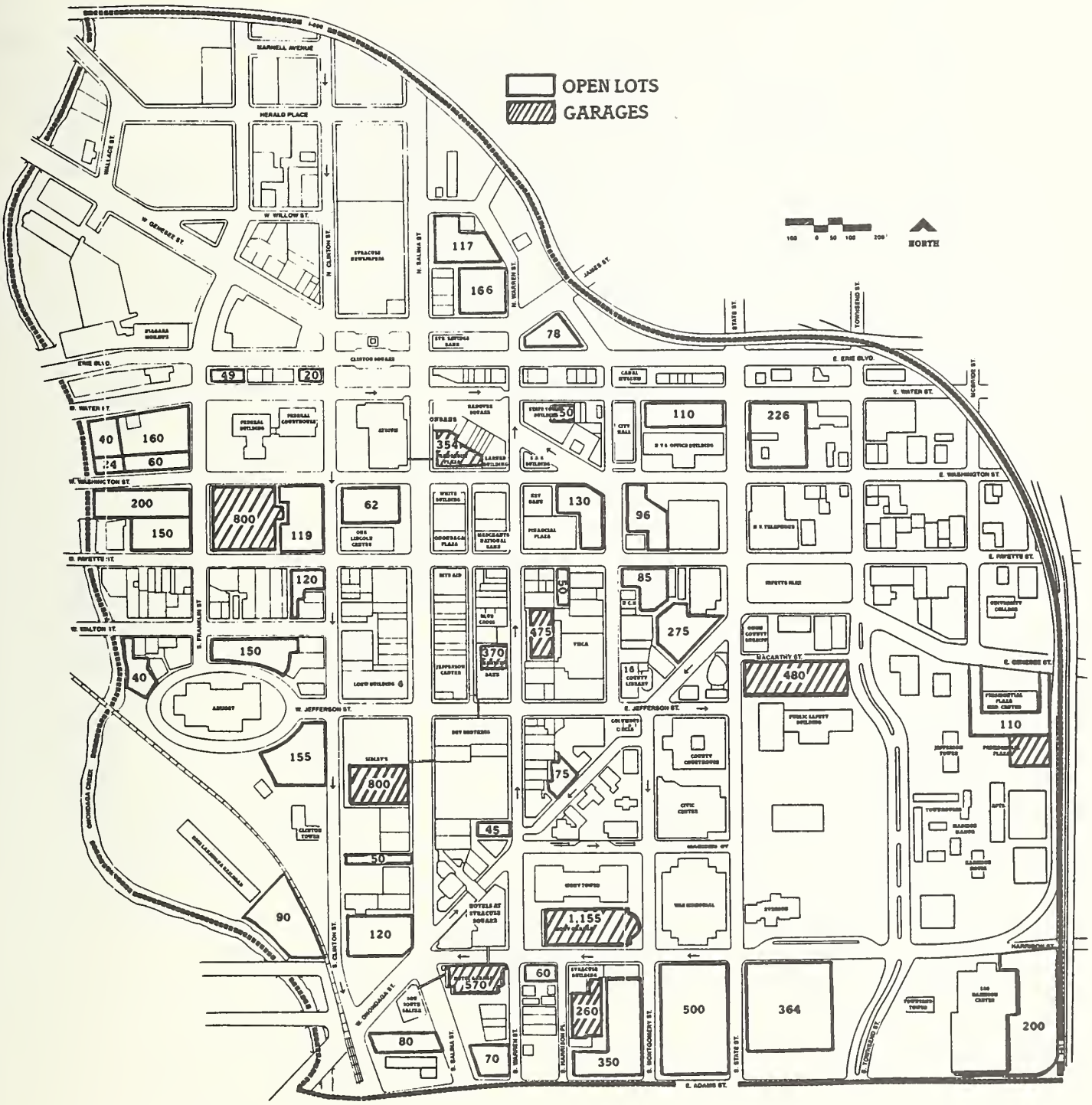


FIGURE 1 PUBLIC PARKING IN DOWNTOWN SYRACUSE

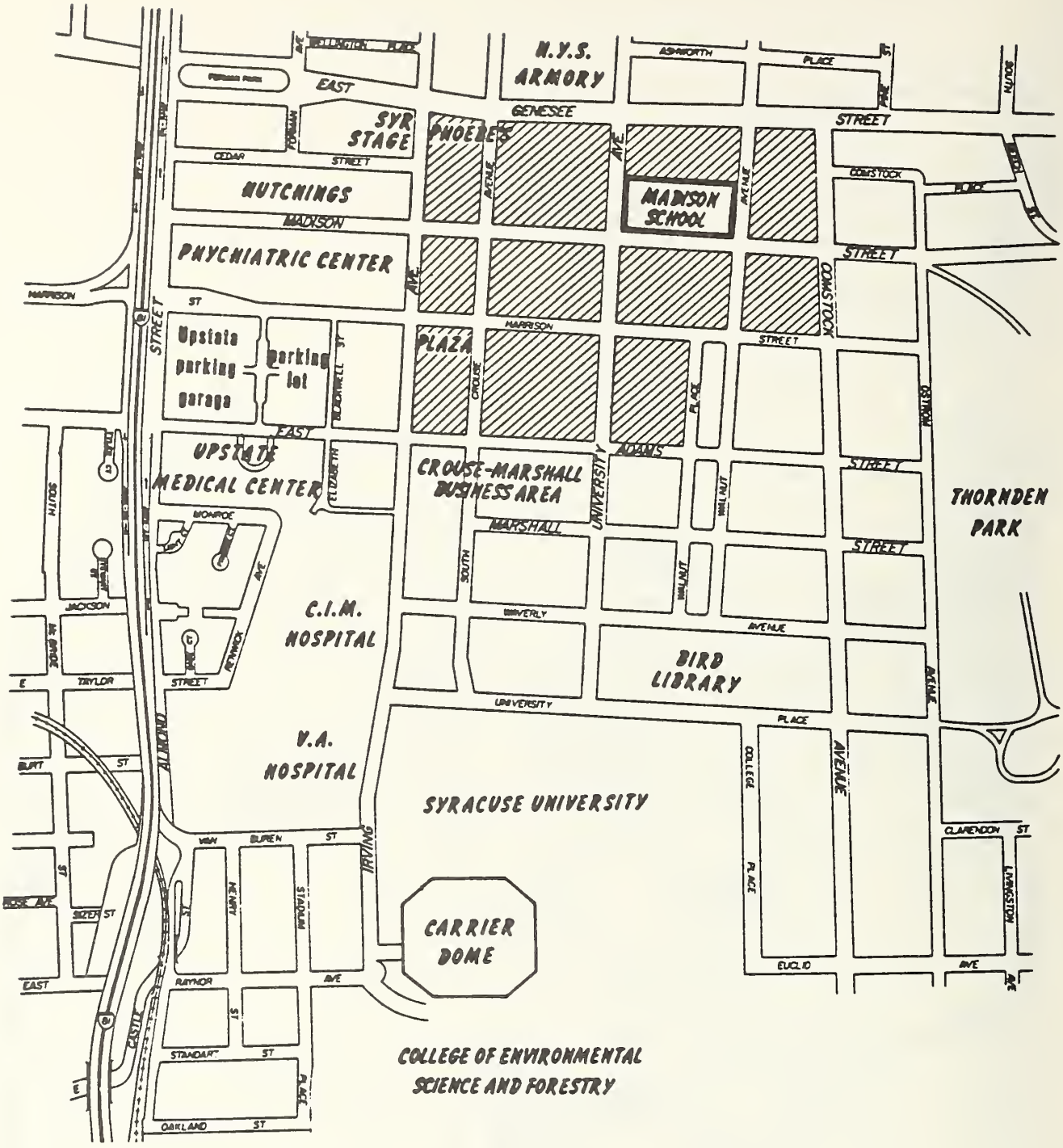


FIGURE 2 UNIVERSITY HILL AREA

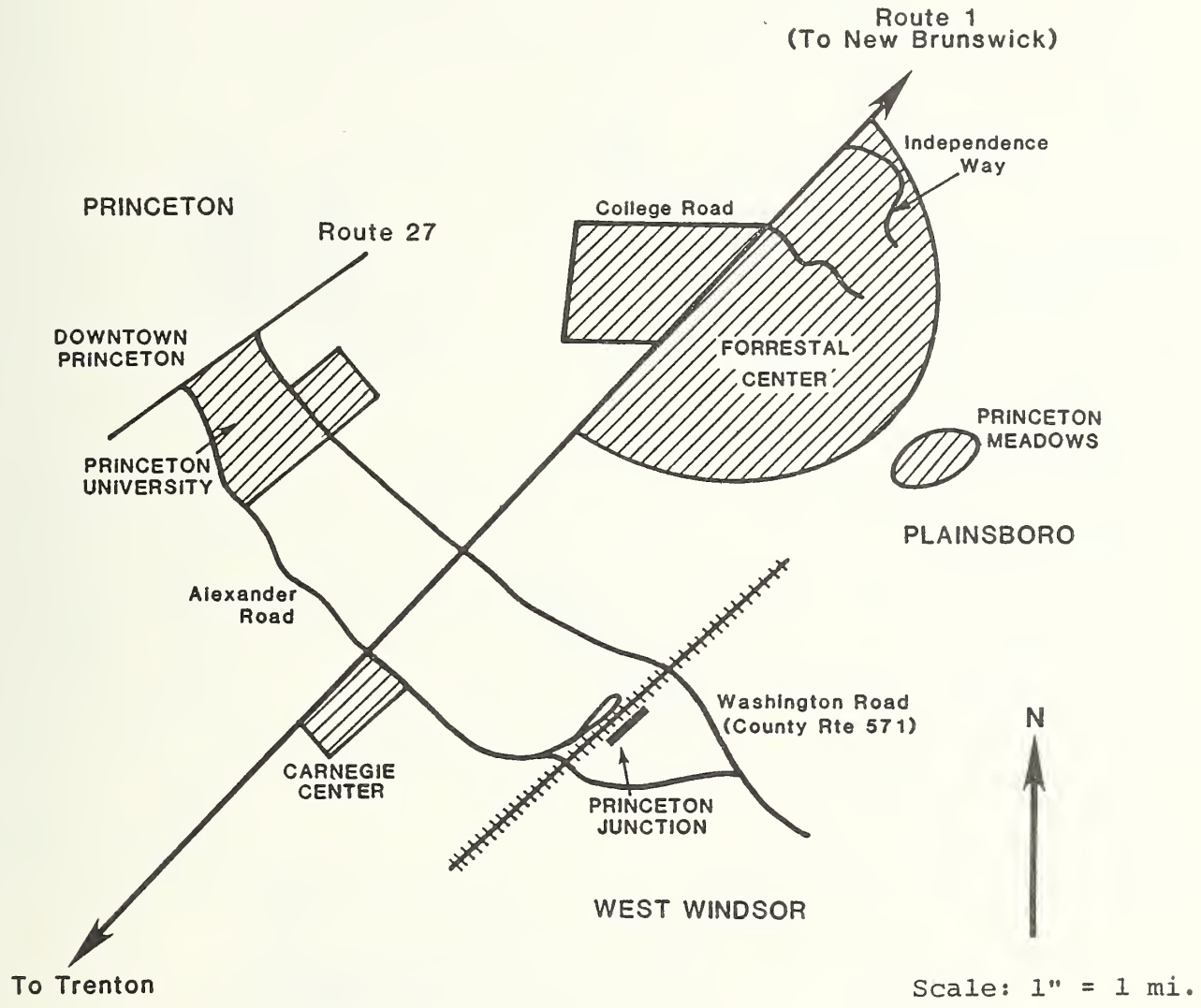


FIGURE 3 ROUTE 1 CORRIDOR

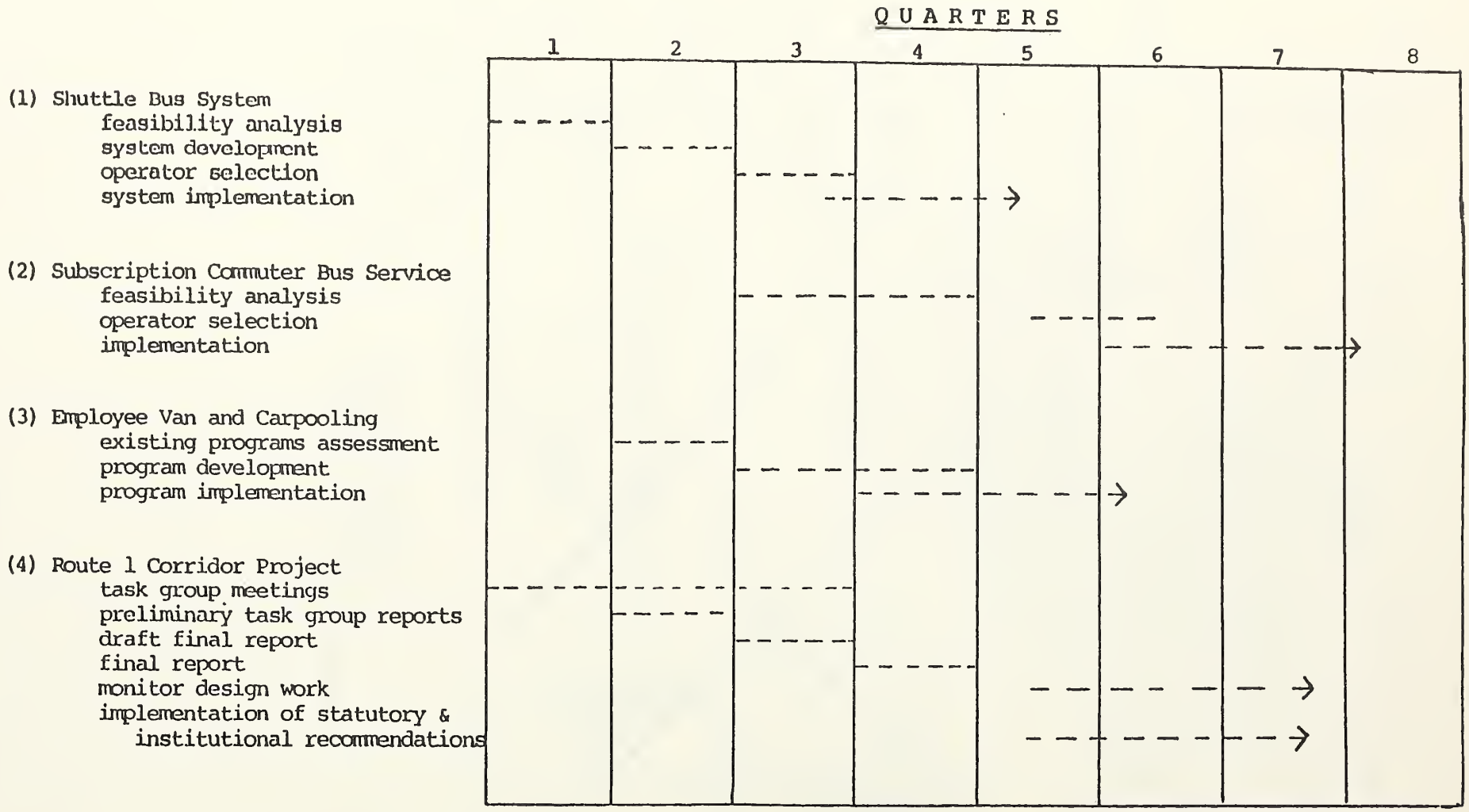


FIGURE 4 MSM/TMA PROJECT SCHEDULE

MSM/March 19, 1984

FIGURE 5
STUDY AREA LOCATION

PBSJ

DOWNTOWN BUS LOOP

TASK FORCE

Public

Honorable Andrew Young
MAYOR, CITY OF ATLANTA

Honorable Marvin Arrington
PRESIDENT, ATLANTA CITY COUNCIL

Honorable Bill Campbell
CHAIRMAN, TRANSPORTATION COMMITTEE
ATLANTA CITY COUNCIL

Mr. Clay Long
CHAIRMAN, MARTA BOARD

Private

Mr. Sam Williams
CHAIRMAN, ATLANTA CONVENTION
& VISITORS BUREAU

Mr. Alex W. Smith
CHAIRMAN, C.A.P. TRANSPORTATION
COMMITTEE

Mr. R.W. Scherer
CHAIRMAN, GEORGIA POWER COMPANY
CHAIRMAN, CENTRAL ATLANTA PROGRESS

MEETING FREQUENCY: QUARTERLY

FUNCTIONS:
1. Decide Policy Issues
2. Monitor Study Progess
3. Advocate Study Results

PREPARED BY CAP, INC. (URBAN DESIGN TEAM) UNDER CONTRACT WITH THE ATLANTA REGIONAL COMMISSION. THE PREPARATION OF THIS WAS FINANCED IN PART BY FUNDS PROVIDED BY THE URBAN MASS TRANSPORTATION ADMINISTRATION

CENTRAL ATLANTA PROGRESS, INC.

FIGURE 6 TASK FORCE MEMBERSHIP

DOWNTOWN BUS LOOP

TECHINICAL ADVISORY COMMITTEE

Public

Mr. Kenneth M. Gregor
GENERAL MANAGER, MARTA

Mr. Harry West
EXECUTIVE DIRECTOR, ATLANTA REGIONAL COMMISSION

Mr. Thomas D. Moreland
COMMISSIONER, GEORGIA DEPARTMENT OF TRANSPORTATION

Commissioner Chester Funnyé
DEPARTMENT OF STREETS AND ENVIRONMENT, CITY OF ATLANTA

Private

Mr. Ted Sprague
PRESIDENT, ATLANTA CONVENTION & VISITORS BUREAU

Mr. Robert Ferguson
DEVELOPMENT DIRECTOR, THE ROUSE COMPANY

Mr. Dan Sweat
PRESIDENT, CENTRAL ATLANTA PROGRESS

MEETING FREQUENCY: MONTHLY

FUNCTIONS:

1. Technical review of consultants.
2. Agency coordination.
3. Data sharing and input.
4. Recommend policy options.

PREPARED BY CAP INC (URBAN DESIGN TEAM) UNDER CONTRACT WITH THE ATLANTA REGIONAL COMMISSION THE PREPARATION OF THIS WAS FINANCED IN PART BY FUNDS PROVIDED BY THE URBAN MASS TRANSPORTATION ADMINISTRATION

CENTRAL ATLANTA PROGRESS, INC.

FIGURE 7 TAC MEMBERSHIP

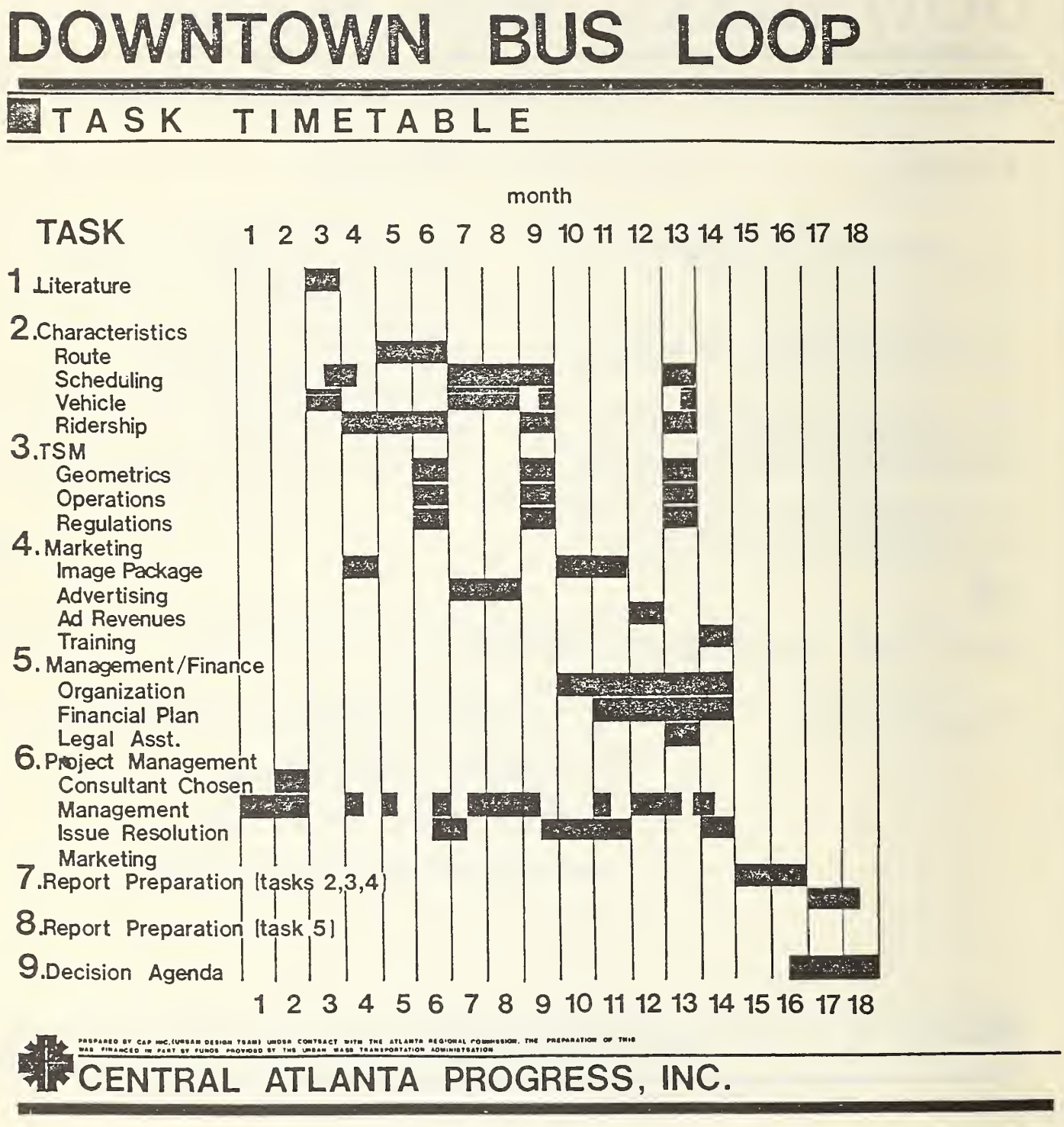


FIGURE 8 ORIGINAL SCHEDULE

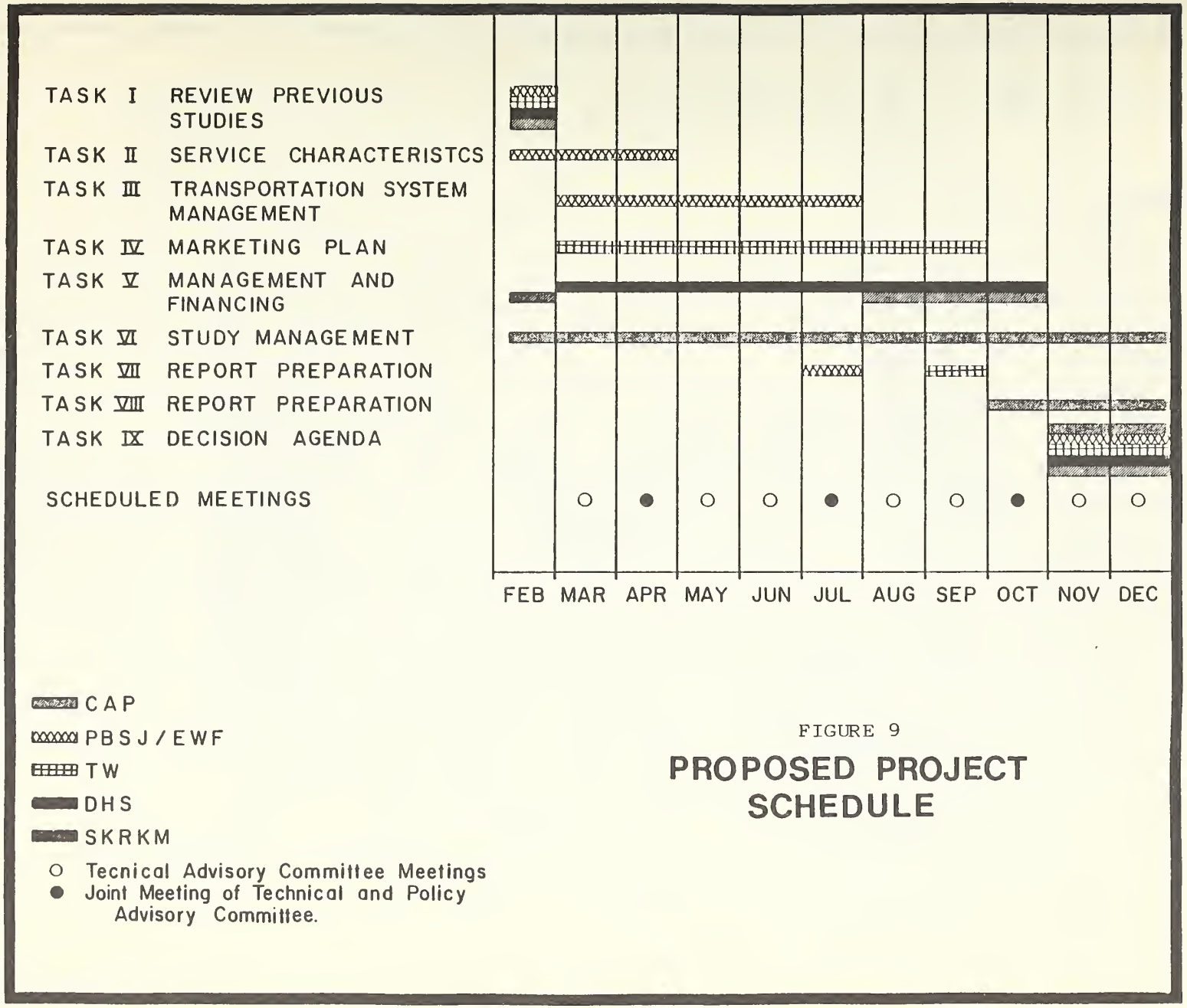


FIGURE 9

PROPOSED PROJECT SCHEDULE

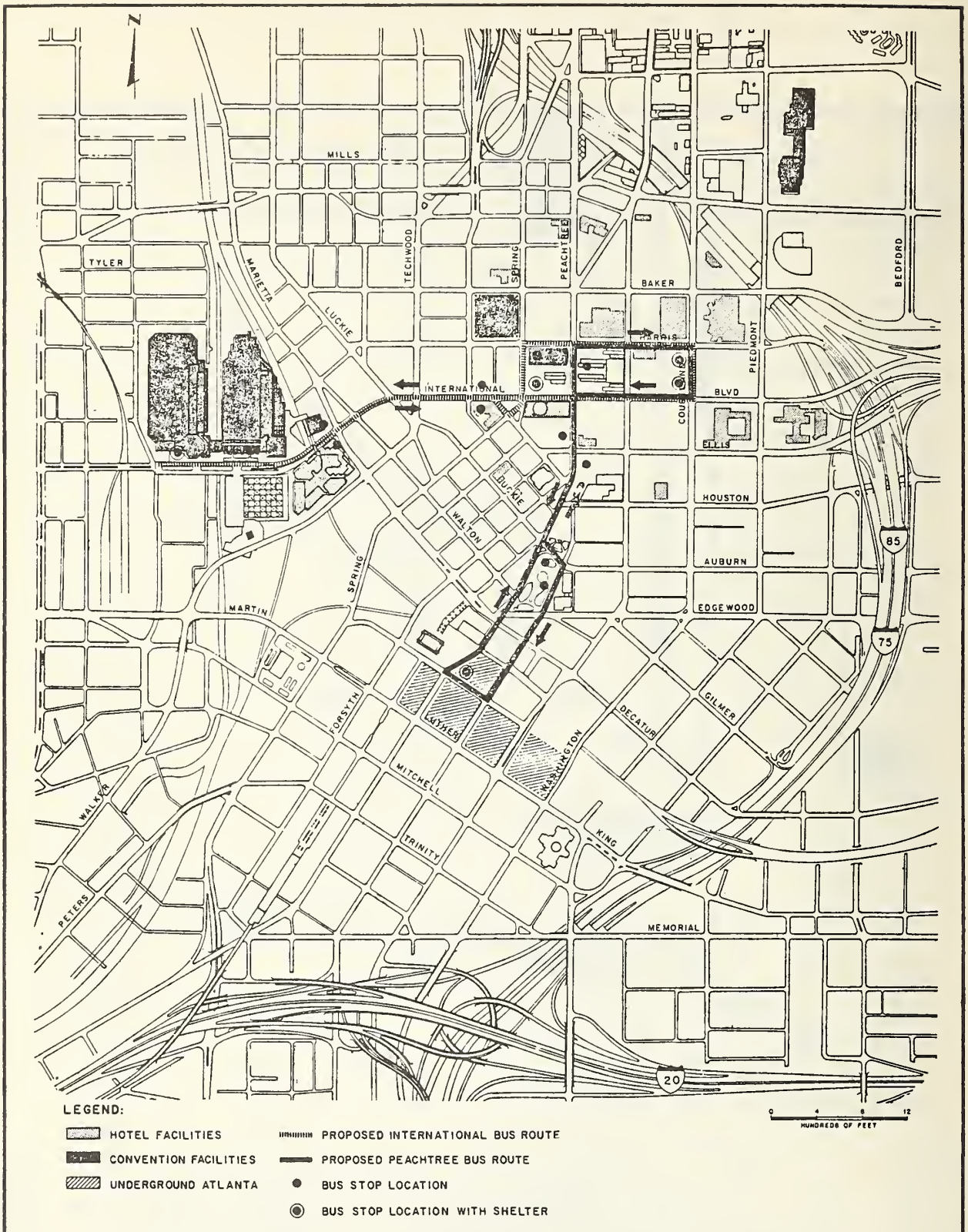


FIGURE 10

RECOMMENDED BUS ROUTES

PBSJ

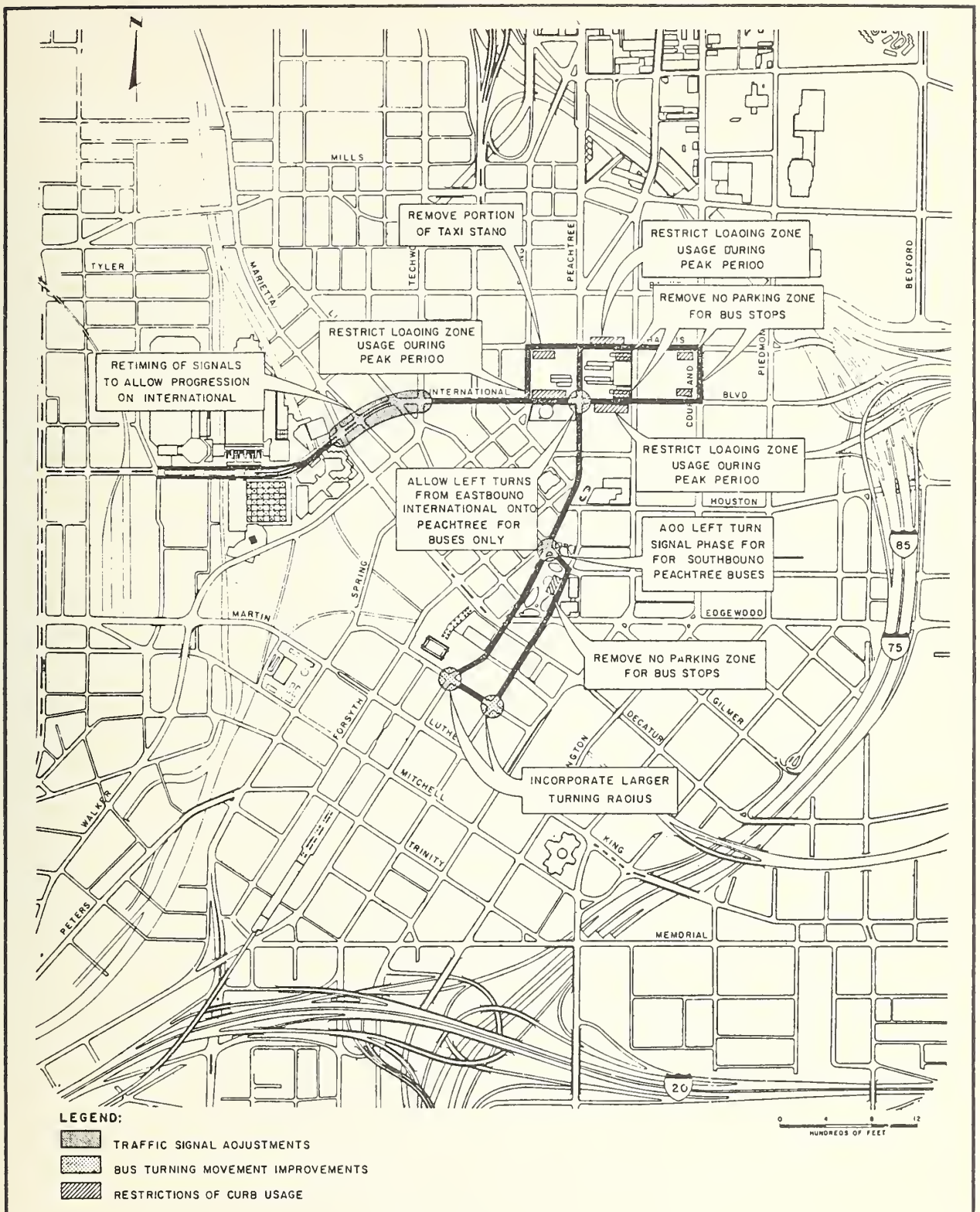


FIGURE 11

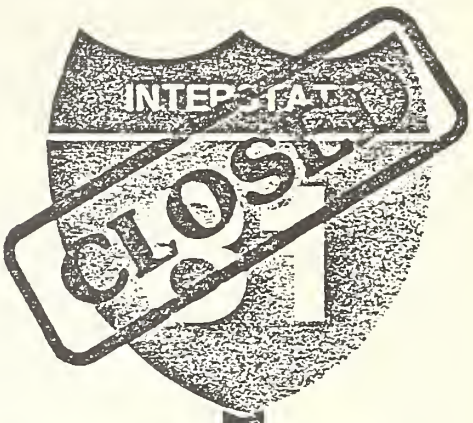
RECOMMENDED TSM MEASURES

PBSJ

APPENDIX B

I-81 CLOSURE BROCHURE

THREE WAYS TO BEAT THE MAZE



What's happening

Beginning in mid-July, a major reconstruction project on I-81 will require that a section of the highway through Downtown Syracuse be closed for a three month period.

- SOUTHBOUND I–81 CLOSED – FROM ITS INTERCHANGE WITH I–690 SOUTH TO THE ADAMS STREET ON–RAMP. THE ADAMS STREET ON–RAMP AND I–690 EAST AND WESTBOUND WILL BE OPEN DURING CONSTRUCTION.
- Also, ONE NORTHBOUND LANE OF I–81 in the construction zone area will be closed and traffic in the remaining lane will be slowed to 30 m.p.h.

Why it's happening

Those who travel I-81 through Downtown Syracuse know all too well the condition of the highway has deteriorated to the point where rehabilitation is now necessary. Over the past 15 years, salt has penetrated the concrete pavement and corroded the steel reinforcing bars. As the corrosion advances, the concrete surface breaks off, resulting in an unstable wearing surface that cannot be repaired through normal patching. The project will involve removing the concrete surface, cleaning the reinforcing bars and placing a special salt resistant concrete. This work is also necessary to prevent major structural damage to the bridges. While the new concrete is being placed, any nearby traffic would generate vibrations causing a rough surface. Therefore, it will be necessary to limit and slow traffic in the northbound lanes. The result will be a safer, smoother highway.

This folder has been prepared to provide you with alternative ways to travel to Downtown Syracuse while the I-81 Southbound lanes are closed.

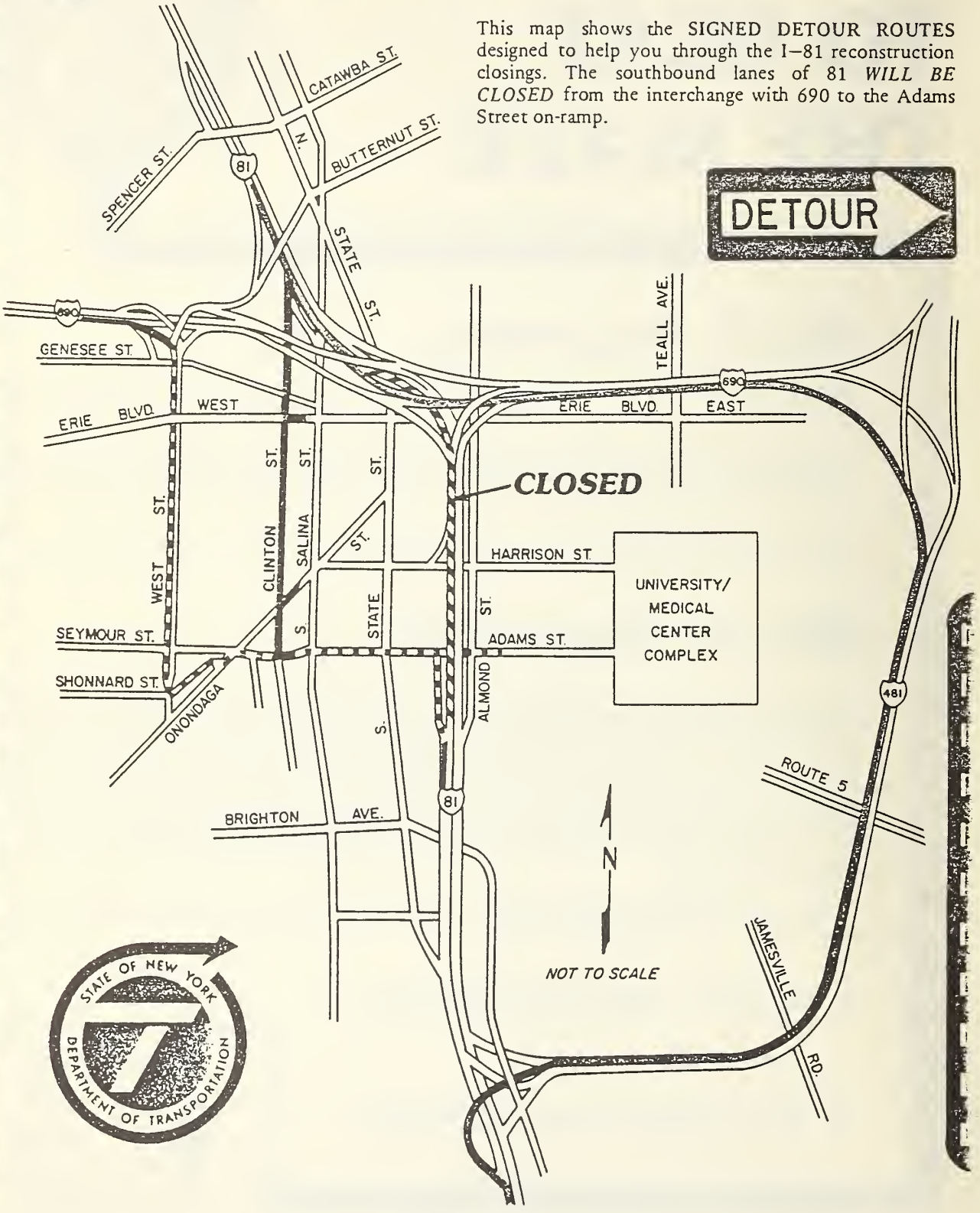
1. Detours–Alternate Routes

2. Carpools

3. Park & Ride Express Buses

1 DETOUR ROUTES

This map shows the SIGNED DETOUR ROUTES designed to help you through the I–81 reconstruction closings. The southbound lanes of 81 *WILL BE CLOSED* from the interchange with 690 to the Adams Street on-ramp.



Signed Detour Routes

FROM THE NORTH ON I–81

Destination: South of Syracuse

Route: Follow detour signs on I-81 South to I-690 East to I-481 South connecting back to I-81 South.

Destination: University Hill, South Campus/Ainsley Drive/Brighton Avenue area (Exits 17 & 18)

Route: From I-81 Southbound use the Franklin - West Street Exit (Exit 20). Take West Street and follow detour signs, turning left on Shonnard Street to East Adams Street, then on to your destination.

Destination: Downtown

Route: From I-81 Southbound use the Salina - Clinton Street Exit (Exit 19). Follow detour signs to destination.

FROM THE WEST ON I–690

Destination: Downtown, University Hill, South Campus/Ainsley Drive/Brighton Avenue area (Exits 17 & 18)

Route: From I-690 Eastbound use the West Street Exit (Exit 6). Take West Street and follow detour signs, turning left on Shonnard Street to East Adams Street, then on to your destination.

Alternate Routes

Besides the official signed detour routes, the following are additional alternate routes you may wish to use to reach your destination. Although unmarked, these routes are designed to accommodate the flow of additional vehicles. The Salina Street route, specifically, should be an especially effective alternative since the traffic lights have recently been timed through the installation of coordinating equipment.

Destination: Downtown/University Hill

Route: From Onondaga Parkway, Old Liverpool Road or Buckley Road, take Park Street to North Salina Street. Proceed southbound on North Salina Street into Downtown.

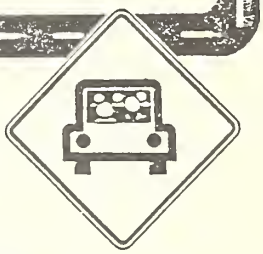
Destination: Downtown/University Hill

Route: From I-81 Southbound use the Spencer - Catawba Street Exit (Exit 21). Turn left on Catawba and proceed one block. Turn right onto State Street and proceed to Downtown or East Adams Street.

Destination: South Campus/Ainsley Drive/Brighton Avenue area (Exit 17)

Route: From I-690 Westbound, use Teall Avenue Exit (Exit 8), turning left to Erie Boulevard. Turn right and proceed to Almond Street. Turn left onto Almond, south to the East Adams Street on-ramp to I-81.

2 CARPOOLING



Carpooling is another alternative to coping with the I-81 maze this summer. Carpooling offers you lower commuting costs and the convenience of shared driving while minimizing traffic congestion during the reconstruction period.

CARAVAN is a carpooling matching service which has been successful in matching Syracuse area commuters for the past 5 years. In conjunction with the I-81 project, *CARAVAN* will be providing both short and long-term matching services to persons commuting to either the Downtown or University Hill areas. This service is offered free to you by the Syracuse Metropolitan Transportation Council, the University Hill Corporation and the Downtown Committee.

HOW TO BECOME A CARAVAN CARPOOLER

1) Call 479-9999 to obtain a *CARAVAN* Sign-up Form.
2) Complete and return the form.
3) *CARAVAN* will match you with other interested carpoolers with similar travel patterns and work schedules. Priority will be given to matching you with others within the same employment center. In the event that we cannot immediately match you, we will keep your name on file for a future match.
4) You will be contacted by mail with the names, addresses and work telephone numbers of other persons expressing an interest in carpooling. It will then be up to you to contact these persons and make carpooling arrangements.

CARAVAN 479-9999

3 PARK & RIDE

Express Buses

Relax in climate controlled comfort - take the bus! Centro and S & O Motor Lines will operate special Express bus service along the Route 11 and Route 57 corridors to downtown.

Express buses will operate from 5 free *PARK & RIDE* lots. Join a carpool or board an Express bus - buses will leave every 15 minutes in peak hours. And the price is unbeatable - *FREE FARE* for the first week. Ride for less than it costs to park downtown - save on gas and insurance costs.

Help everyone: each busload represents 45 fewer cars. Check the schedule...hop aboard...beat the maze - on the bus!

FOR PARK & RIDE BUS INFORMATION

CALL 424-1200

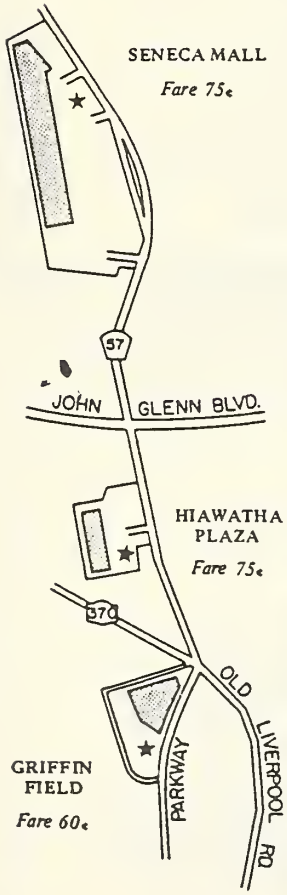
centro

A.M.

LEAVES			ARRIVES	
Seneca Mall	Hiawatha Plaza	Griffin Field	Fay. & Sal. Downtown	Sims Hall Syr. Univ.
7:05	7:10	7:20	7:35	7:50
7:20	7:25	7:35	7:50	
7:35	7:40	7:50	8:05	
7:50	7:55	8:05	8:20	
8:05	8:10	8:20	8:35	
8:20	8:25	8:35	8:50	

P.M.

LEAVES		ARRIVES		
Sims Hall Syr. Univ.	Fay. & Sal. Downtown	Griffin Field	Hiawatha Plaza	Seneca Mall
	4:20	4:35	4:45	4:50
	4:35	4:50	5:00	5:05
4:35	4:50	5:05	5:15	5:20
	5:05	5:20	5:30	5:35
	5:20	5:35	5:45	5:50
	5:35	5:50	6:00	6:05



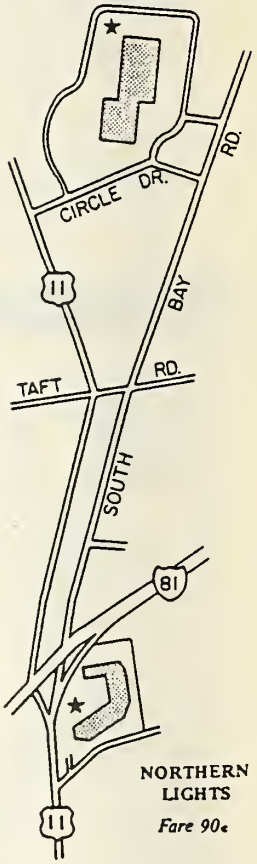
A.M.

LEAVES		ARRIVES
Penn-Can Mall	Northern Lights	Fay. & Sal. Downtown
6:55	7:04	7:30
7:10	7:19	7:45
7:25	7:34	8:00
7:40	7:49	8:15
7:55	8:04	8:30
8:10	8:19	8:45

P.M.

LEAVES		ARRIVES
Fay. & Sal. Downtown	Northern Lights	Penn-Can Mall
4:15	4:41	4:50
4:30	4:56	5:05
4:45	5:11	5:20
5:00	5:26	5:35
5:15	5:41	5:50
5:30	5:56	6:05

PENN-CAN MALL
Fare $1.00



S&O

APPENDIX C

CERTIFICATE OF INCORPORATION, BYLAWS, AND MEMORANDUM OF UNDERSTANDING FOR GREATER PRINCETON TMA

December 11, 1984

CERTIFICATE OF INCORPORATION
OF
THE GREATER PRINCETON TRANSPORTATION MANAGEMENT ASSOCIATION

This is to certify that the undersigned do hereby associate themselves into a corporation under and by virtue of the provisions of an act of the legislature of the State of New Jersey, and Title 15A of the Revised Statutes.

1. Name. The name of this corporation is The Greater Princeton Transportation Management Association.

2. Purposes. This corporation is formed exclusively for charitable, scientific, and educational purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code of 1954, as amended, and said purposes shall include, without limitation: (1) improving environmental and working conditions for the region's residents, employees, customers, visitors as well as the general public; (2) conserving energy and simultaneously reducing regional traffic congestion, consequent air pollution, and future parking needs; (3) organizing transportation initiatives including, but not limited to carpooling and vanpooling, flexible hours programs, parking programs; (4) creating a central information service on ridesharing, paratransit, public transportation and other transportation-related subjects; (5) acting as liaison with public and private transportation agencies in the Central New Jersey region; (6) developing a regionwide carpool matching service; (7) promoting ridesharing activities; (8) coordinating transportation programs in the region; and (9) promoting any and all activities suitable and proper for the accomplishment of these purposes.

Further, this corporation is formed to carry on any activity and to deal with and expend any property or income received for any of the foregoing purposes without limitations, except such limitations, if any, as may be contained in the instrument under which such property is received, the Certificate of Incorporation, the Bylaws of the Corporation, or any other limitations as are prescribed by law.

The Corporation is formed exclusively for purposes for which a corporation may be formed under the New Jersey Nonprofit Corporation Act and not for pecuniary profit or financial gain. No part of the assets, income or profit of the Corporation shall be distributable to, or inure to the benefit of, its members, trustees, officers or any private individual except such reasonable compensation as may be allowed for services actually rendered to the Corporation.

Upon the termination or dissolution of the Corporation in any manner or for any reason, its assets, if any, remaining after the payment (or provision for payment) of all liabilities of the Corporation, shall be distributed to such organization or organizations, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code of 1954, as amended, and which have been determined to be exempt from taxation under the provisions of Section 501(c)(3) of the said Internal Revenue Code, as the Trustees of the Corporation shall select.

Notwithstanding any other provision of this Certificate, the Corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law), or (b) by a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code of 1954 (or the corresponding provision of any future United States Internal Revenue Law). The Corporation shall distribute its income for each taxable year at such time and in such manner as not to become subject to any tax on undistributed income imposed by Section 4942 of the Internal Revenue Code of 1954; shall not engage in acts of self-dealing as defined in Section 4941(b) of said Coda; shall not retain any excess business holdings as defined in Section 4943(c) of said Code; shall not make any investments so as to subject it to tax as defined in Section 4944 of said Code; nor shall it make any taxable expenditures as defined in Section 4945(d) of said Code.

3. Principal Office. The location of the registered office of this Corporation is Suite 520, One Palmer Square, Princeton, New Jersey 08542, and the name of the agent therein and in charge thereof upon whom process against the Corporation may be served is Samuel W. Lambert, III.

4. Number of Trustees. The number of Trustees of this Corporation shall be not less than three nor more than twenty-five as determined from time to time in accordance with the Bylaws.

5. Name of Trustees. For the first year of existence of this Corporation, the Trustees shall be fourteen (14) in number, together with such additional Trustees as may be added pursuant to the Bylaws, and the names and addresses of the said Trustees are:

Class A

Albert J. Hanson
Regional Vice President
McGraw-Hill, Inc.
Princeton-Hightstown Road
Hightstown, NJ 08520

L. Lynnwood Aria
Executive Director
Educational Testing Service
Rosedale Road
Princeton, NJ 08541

Stanley M. Porfido
Staff Vice President
RCA Corporation
Route 38
Cherry Hill, NJ 08358

William F. King III
Project Manager
Carnegie Center
101 Carnegie Center
Princeton, NJ 08540

Gary W. Green
Vice President Princeton Reg.
Collins Development Corp.
44 Nassau Street
Princeton, NJ 08542

Sal Astarita
Department Chief
AT&T Technologies, Inc.
P.O. Box 900
Princeton, NJ 08540

Ellen Gill Miller
Assistant Manager
Princeton Forrestal Center
105 College Road East, 3rd Floor
Princeton, NJ 08540

William M. Swain, Jr.
Operating Partner
Linpro
The Office Center
Plainsboro, NJ 08536

Class B

Carol L. Beske
Regional Marketing Director
Fellows, Read & Assoc., Inc.
746 Alexander Road
Princeton, NJ 08540

Ruth Bauer
General Manager
Quakerbridge Mall
Lawrence, NJ 08648

Christopher S. Tarr
One Palmer Square
Princeton, NJ 08542

Samuel M. Hamill, Jr.
Executive Director
ASM Regional Study Council, Inc.
621 Alexander Road
Princeton, NJ 08540

Robert Smart
Associate Head of Admin. Dept.
Princeton Plasma Physics Lab.
Princeton, NJ 08544

Reynolds Thompson
Princeton University Planner
MacMillan Building
Princeton, NJ 08544

IN WITNESS WHEREOF, we have hereunto set our hands and seals this 11th day of December, 1984.

_____
Carol L. Beske

_____
Ellen Gill Miller

_____
L. Lynnwood Aris

_____
Christopher S. Tarr

_____
Robert Smart

_____
Samuel M. Hsmill, Jr.

BY-LAWS OF
THE GREATER PRINCETON TRANSPORTATION MANAGEMENT ASSOCIATION
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December 17, 1984

BYLAWS
OF
THE GREATER PRINCETON TRANSPORTATION MANAGEMENT ASSOCIATION

ARTICLE I - NAME

The name of this nonprofit corporation is The Greater Princeton Transportation Management Association.

ARTICLE II - PURPOSES

The purposes for which the corporation as been formed are as stated in the Certificate of Incorporation, as the same may from time to time be amended.

ARTICLE III - BOARD OF TRUSTEES

Section 1 - Authority - The business of the corporation shall be conducted by a Board of Trustees. The Board shall exercise all the powers and authority of the corporation, except that reserved to the members, in accordance with its Certificate of Incorporation and these bylaws.

Section 2 - Number, Classes, Election and Term of Office - The Board of Trustees shall be composed of not less than three (3) nor more than twenty-five (25) Trustees, the exact number of which may be fixed from time to time by the Board of Trustees. The Board of Trustees shall be composed of two (2) classes aof Trustees. Class A shall consist of representatives of the private sector and Class B shall consist of representatives of the public interest sector. The size of neither class of Trustees shall exceed 65% of the Board of Trustees at any time. Trustees shall be elected annually by the majority vote of those members of the corporation present at the annual meeting of the members. The term of office of the initial group of class A Trustees shall expire 2 years after the first annual meeting. Thereafter, the term of class A Trustees shall expire every 2 years. The term of office of the initial group of class B Trustees shall expire 3 years after the first annual meeting. Thereafter, the term of class B Trustees shall expire every 2 years.

Section 3 - Vacancies - The power to fill vacancies in the office of Trustee for the unexpired term shall be vested in the Trustees then in office and by a majority vote of those present. Each Trustee so elected shall hold office for the designated term and until a successor has been elected.

Section 4 - Limitations on Terms - Trustees shall be eligible to succeed themselves, and there shall be no limitation on the number of consecutive terms a Trustee may serve.

Section 5 - Compensation - Trustees shall serve without compensation; but nothing heein contained shall be construed to preclude any Trustee from serving the corporation in any other capacity and receiving reasonable compensation therefor.

Section 6 - Resignation - Any Trustee may resign at any time by giving written notice to the Secretary. Such resignation shall take effect at the time specified therein, and unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective. If any Trustee shall fail to attend three consecutive meetings of the Board of Trustees without excuse accepted as satisfactory by the Board of Trustees, the Trustee shall be deemed to have resigned and the vacancy shall be filled.

Section 7 - Annual and Regular Meetings - A regular annual organization meeting of the Board of Trustees shall be held each year without other notice than this bylaw, immediately after, and at the same place as the annual meeting of members. The Board of Trustees may provide by resolution, the time and place, within the State of New Jersey, for the holding of additional regular meetings of the Board without other notice than such resolution.

Section 8 - Special Meetings - Special meetings of the Board of Trustees may be called by or at the request of the president or any two (2) Trustees. The person or persons authorized to call special meetings of the Board may fix the time and place for holding any special meeting of the Board called by them. Notice of any special meeting of the Board of Trustees shall be given at least five (5) days prior and sent by mail to each Trustee at the address as shown by the records of the corporation. Any Trustee may waive notice of any meeting.

Section 9 - Quorum - A majority of the entire Board of Trustees shall constitute a quorum for the transaction of business at any meeting of the Board.

Section 10 - Manner of Acting - The act of a majority of the Trustees present at a meeting at which a quorum is present shall be the act of the Board of Trustees, unless the act of a greater number is required by law or by these bylaws. Any action required by law to be taken at a meeting of Trustees or any action which may be taken at a meeting of Trustees, may be taken without a meeting if a consent in writing setting forth the action so taken shall be signed by all of the Trustees.

ARTICLE IV - MEMBERS

Section 1 - Voting Members - Any corporation, developer, organization, institution, or individual may become a member of the corporation in good standing, upon payment of dues, as prescribed in these bylaws.

Section 2 - Dues - Voting members shall be assessed annual dues payable to the corporation as determined by the Board of Trustees.

Section 3 - Voting Rights - Each member in good standing shall be entitled to one (1) vote on each matter submitted to a vote of the members.

Section 4 - Non-Voting Members - There shall be such class or classes of non-voting members as the Board of Trustees may from time to time establish. The qualifications, rights, powers, duties and obligations of such non-voting members shall be as provided by the Board of Trustees.

Section 5 - Resignation - Any member may resign by filing a written resignation with the Secretary, but such resignation shall not relieve the member of any contractual obligation that may be in force. Dues payments are not refundable.

Section 6 - Annual Meetings - An annual meeting of the members shall be held at such time and place as the Board of Trustees shall determine, for the purpose of electing Trustees and for the transaction of such other business as may properly come before the meeting.

Section 7 - Special Meetings - Special meetings of the members may be called by the President, the Board of Trustees, or by request in writing of not less than one-fifth of the total membership having voting rights. The Board of Trustees may designate any place within the State of New Jersey as the place for any special meeting called by the Board of Trustees or otherwise.

Section 8 - Notice of Meetings - Written or printed notice stating the place, day and hour of any meeting of members shall be delivered either personally or by mail, to each memeber entitled to vote at such meeting, not less than ten (10) days before the date of such meeting, by or at the direction of the President, or the Secretary, or the officers or persons calling the meeting. In case of a special meeting or when reuired by statute or by these by-laws, the purpose or purposes for which the meeting is called shall be stated in such notice. If mailed, the notice of a meeting shall be deemed to be delivered when deposited in the United States mail addressed to the member at the address that appears on the records of the Corporation, with postage thereon prepaid.

Section 9 - Quorum - The members holding one-thire of the total votes which may be cast at any meeting shall constitute a quorum at such meeting. If a quorum is not present at any meeting of members, a majority of the members present may adjourn the meeting without further notice.

Section 10 - Manner of Acting - The affirmative vote, at a meeting of members duly held and at which a quorum is present, of a majority of the members present at such meeting who vote shall be the act of the members. Voting by members for the election of Trustees and for the taking of any other action to be voted upon by members may be conducted by mail. The resolution or resolutions to be so voted upon shall be mailed as a ballot to each member by first class mail, postage prepaid, at the latest address appearing on the list of members maintained by the corporation, or shall be hand delivered, at least ten (10) days before the action is to become effective. The proportional voting power of members designated by statute or by these bylaws as the act of members for any purpose shall be determined from the total number of members who actually vote by mail within the time prescribed in the mailing, rather than from the total number of members entitled to vote.

Section 11 - Proxies - At any meeting of members, a member entitled to vote may vote by proxy executed in writing by the member or by the member's duly authorized attorney-in-fact. No proxy shall be valid after six (6) months from the date of its execution unless otherwise provided in the proxy.

ARTICLE V - OFFICERS

Section 1 - Number, Election and Term of Office - The officers of the corporation shall be a President, a Vice-President, a Secretary and a Treasurer, each of whom shall be elected annually by the Board of Trustees from among the Trustees of the corporation. No two (2) offices may be held by the same person. Each officer shall hold office for a term from the time the officer is elected until the next succeeding annual meeting of the Board of Trustees and until a successor shall have been duly elected and qualified. New offices may be created and filled at any meeting of the Board of Trustees.

Section 2 - Removal - Any officer elected or appointed by the Board of Trustees may be removed by the Board of Trustees whenever in its judgment the best interests of the Corporation would be best served thereby.

Section 3 - Vacancies - A vacancy in any office because of death, resignation, removal, or otherwise, may be filled by the Board of Trustees for the unexpired portion of the term.

Section 4 - President - The President shall be the principal executive officer of the corporation and shall in general

supervise and control all of the business and affairs of the corporation. The president shall preside at all meetings of the members and of the Board of Trustees. The President may sign, with the Secretary or any other proper officer of the corporation authorized by the Board of Trustees, any deeds, mortgages, bonds, contracts, or other instruments which the Board of Trustees has authorized to be executed, except in cases where the signing and execution thereof shall be expressly delegated by the Board of Trustees or by these bylaws or by statute to some other officer or agent of the corporation; and in general the President shall perform all duties incident to the office of president and such other duties as may be prescribed by the Board of Trustees from time to time.

Section 5 - Vice President - In the absence of the President or in the event of the President's inability or refusal to act, the Vice President shall perform the duries of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. The Vice President shall perform such other duties as from time to time may be assigned to him or her by the President or by the Board of Directors.

Section 6 - Treasurer - If required by the Board of Trustees, the Treasurer shall give a bond for the faithful discharge of his or her duties in such sum and with such surety or sureties as the Board of Trustees shall determine. The Treasurer shall have charge and custody of and by responsible for all funds and securities of the corporation; shall keep full and accurate accounts of assets, liabilities, receipts and disbursements and other transactions of the corporation in books belonging to the corporation; shall cause regular audits of such books to be made under the guidance and direction of the Board; and shall deposit all moneys and other valuable effects in the name of and to the credit of the corporation in such banks or other depositories as may be designated by the Board. The Treasurer, with the written authority of the President, shall disburse the funds of the corporation as may be ordered by the Board, taking proper vouchers for such disbursements. He or she shall render to the President and to the Trustees at the meetings of the Board, or whenever they may require it, a statement of all transactions as Treasurer and an account of the financial condition of the corporation. Generally, the Treasurer shall perform all the duties incident to the office of Treasurer and such other duties as may from time to time be assigned to him or her by the Board or by the President.

Section 7 - Secretary - The Secretary shall act as Secretary of and keep the minutes of all meetings of the Board of Trustees and of the Executive Committee; see that all notices are duly given in accordance with the provisions of these bylaws or as required by law; be custodian of the seal of the corporation and see that the seal of the corporation is affixed to all documents, the execution of which on behalf of the corporation under its

seal is duly authorized in accordance with the provisions of these bylaws; have charge of the books, records and papers of the corporation relating to its organization as a corporation and shall see that the report, statements and other documents required by law are properly kept or filed; keep a register of the post office address of each member which shall be furnished to the Secretary by such member; and in general perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him or her by the President or by the Board of Trustees. All of the minutes, records and other documents described above shall be kept at a location designated by the Board of Trustees.

ARTICLE VI - COMMITTEES

Section 1 - Executive Committee - There shall be an Executive committee, which shall consist of the President (who shall act as its Chairperson), the Vice President, the Secretary and the Treasurer, and at least two (2) other Trustees, as appointed from time to time by the Board of Trustees. This committee shall have a maximum of eight (8) members and shall have, and may exercise, in the interim between meetings of the Board of Trustees, all the authority of the Board of Trustees, except that the Executive Committee shall not have the power to amend the bylaws or to elect or remove officers of the corporation. The Executive committee will report its actions in the interim between meetings of the Board of Trustees at the next meeting of the Board of Trustees. Meetings of the Executive Committee shall be called by the President, or in his absence, by the Secretary of the Corporation. A majority of the members of the Executive Committee shall constitute a quorum. The vote of a majority of the members present at a meeting at which a quorum is present shall be the act of the Executive Committee.

Section 2 - Nominating Committee - The Nominating Committee shall consist of five (5) active members of the Corporation, including two (2) from the Board of Trustees and three (3) from the membership at large, who shall be appointed by the President with the advice and consent of the Board of Trustees. This Committee shall be charged with the responsibility of selecting annually a slate of Trustees to be voted upon at the annual meeting of members. It shall also nominate annually a slate of officers of the Corporation to be acted upon by the Board of Trustees at its annual organization meeting. Other nominations for officers and Trustees may be made to this committee by written petition signed by ten (10) members of the Corporation and delivered to the Secretary at least twenty (20) days prior to the annual meeting.

Section 3 - Other Committees - For the better execution of their powers and duties, the Board of Trustees may designate other committees as may be required and deemed necessary, from time to time, with such membership and authority as shall be

provided in the resolution of appointment. The Board of Trustees may appoint, in addition, new members to such committees at any time.

ARTICLE VII - PERSONNEL

Section 1 - Executive Director - The Board of Trustees may employ an Executive Director who shall be responsible for all of the operations of the corporation, subject to the direction of the Board of Trustees. The Board of Trustees shall fix the compensation for such office and approve an organizational and salary structure to be administered under the supervision of the Executive Director.

Section 2 - Other Personnel - The Board of Trustees may also employ such other office and professional personnel, and retain such consultants as may be deemed necessary or desirable to staff the activities of the corporation and to attain its objectives.

ARTICLE VIII - CONTRACTS, CHECKS, DEPOSITS, FUNDS

Section 1 - Contracts - The Board of Trustees may authorize any officer or officers, agent or agents of the corporation, in addition to the officers so authorized by these bylaws, to enter into any contract or to execute and deliver any instrument in the name of and on behalf of the corporation, and such authority may be general or confined to specific instances.

Section 2 - Checks, Drafts, Etc. - All checks, drafts, or orders for the payment of money, notes or other evidences of indebtedness issued in the name of the corporation shall be signed by such officer or officers, or agent or agents of the corporation and is such manner as shall from time to time be determined by resolution of the Board of Trustees. In the absence of such determination by the Board of Trustees, such instruments shall be signed by the Treasurer and countersigned by the President or the Vice President of the corporation.

Section 3 - Deposits - All funds of the coporation shall be deposited from time to time to the credit of the corporation in such banks, trust companies or other depositories as the Board of Trustees may select.

Section 4 - Gifts - The Board of Trustees may accept on behalf of the corporation any contributions, gift, bequest or devise for the general purposes or for any special purpose of the corporation.

ARTICLE IX - BOOKS AND RECORDS

The corporation shall keep correct and complete books and records of account and shall also keep summary minutes of the proceedings of the meetings of its members, Board of Trustees and Committees having any of the authority of the Board of Trustees and shall keep a record giving the names and addresses of the members entitled to vote. At intervals of not more than twelve months the corporation shall prepare a balance sheet showing its financial condition as of a date not more than four months prior thereto and a statement of receipts and disbursements respecting its operations for the twelve months preceding such date. All books and records of the corporation shall be kept at a location designated by the Board of Trustees and may be inspected by any member, or his or her agent or attorney for any proper purpose during usual business hours.

ARTICLE X - SEAL

The Board of Trustees shall adopt and provide a corporate seal which shall be in the form of a circle and shall have inscribed thereon the name of the corporation and the words "Corporate Seal," "1984," and "New Jersey."

ARTICLE XI - FISCAL YEAR

The fiscal year of the corporation shall begin on the first day of January and end on the last day of December in each year.

ARTICLE XII - NON-LIABILITY OF MEMBERS AND CONTRIBUTORS

No members of the corporation and no contributor to the corporation shall be liable for the acts of the corporation, its Board of Trustees, its agents, or its representatives.

ARTICLEXIII-PROVISIONSLIMITINGTHEACTIVITIESOFTHE CORPORATION AND THE DISPOSITION OF ITS ASSETS UPON DISSOLUTION

This corporation is not organized for profit, but is organized and shall operate exclusively for public, charitable, scientific and educational purposes. No part of the net earnings or income or property of the corporation shall enure to the benefit of any donor, member, trustee, officer, or individual having a personal or other interest in the activities of the corporation. This corporation shall not participate or intervene in (including the publishing or distributing of statements) any political campaign on behalf of any candidate for any public office. In the event of the liquidation or dissolution of this corporation, all of its assets, after payment of its just debts, shall be distributed only to those public or private

organizations which shall enjoy tax-exempt status under Section 501(c)(3) of the Internal Revenue Code of 1954 as amended, which organizations shall be dedicated to substantially the same public purposes as this corporation.

ARTICLE XIV - AMENDMENTS

These bylaws may be altered, amended or repealed, and new bylaws may be adopted by a majority of the Trustees present at any regular meeting or at any special meeting of the Board of Trustees, if at least five (50) days prior to the meeting, the proposed amendments to the bylaws are mailed to the Board of Trustees.

MEMORANDUM OF UNDERSTANDING
between
MIDDLESEX SOMERSET MERCER REGIONAL STUDY COUNCIL, INC.
and
GREATER PRINCETON TRANSPORTATION MANAGEMENT ASSOCIATION

Middlesex Somerset Mercer Regional Study Council, Inc. (MSM), an independent, regional planning and research organization, has recently created the Greater Princeton Transportation Management Association (TMA), an independent transportation service organization.

Each entity will function independently, but they will have an ongoing working relationship. This memorandum of understanding between MSM and TMA, endorsed by the Boards of both, is intended to define the terms of that ongoing relationship.

The terms are as follows:

1) MSM will have two representatives on TMA's Board of Trustees.

2) MSM is the recipient of the Urban Mass Transportation Administration's Private Sector Initiatives Challenge Grant funds. TMA will carry out the work program for that grant. MSM will pass through to TMA any funds received for the transportation grant project. TMA, in turn, will be responsible for carrying out the work program, as well as preparation and submittal to grant administrators of all billing information and reporting requirements.

3) Funds collected or to be collected by MSM on behalf of TMA will be transferred to TMA on a schedule mutually agreeable to the Executive Directors.

4) TMA will utilize MSM's administrative and secretarial staff services on an ongoing basis. TMA will reimburse MSM for those services at the hourly rate currently earned by those staff members plus 15% for benefits.

5) TMA may, from time to time, require other MSM staff services. The nature and extent of these services will be agreed to between the agencies' Executive Directors prior to any assignment of work. In these instances, TMA will reimburse MSM for those services at the hourly rate currently earned by those staff members plus 15% for benefits. If MSM ever requires the services of TMA staff, this will be handled in the same manner.

6) TMA will share office facilities with MSM and will reimburse MSM for their use in the following manner: a) Rent (includes utilities) - 25%; b) Xerox (machine, service and supplies) - 25%.

This memorandum of understanding will remain in effect for one year. However, it may be amended from time to time, with the approval of the Boards of both MSM and TMA, as the terms of the relationship between these entities develop and/or change.

Agreed to this _____ day of _____, 1985.

For MSM:

_____

Attest:

_____

For TMA:

_____

_____

REFERENCES

1. "University Hill Parking Study," prepared by Wilbur Smith & Associates for the Metropolitan Development Foundation, 1984.

2. "An Access Plan for Downtown Syracuse and University Hill," draft prepared by Raymond, Parish, Pine & Weiner, Inc., Herbert S. Levinson, and I.K. Chann Associates for the Metropolitan Development Foundation, November 1985.

3. "TMA Newsletter," published quarterly beginning with Spring 1985, by the Greater Princeton Transportation Management Association, 621 Alexander Road, Princeton, NJ 08540

4. "Certificate of Incorporation, Bylaws, and Memorandum of Understanding with the Middlesex Somerset Mercer Regional Study Council, Inc.," Greater Princeton Transportation Management Association, December 1984.

5. "Downtown Bus System Study," prepared for Central Atlanta Progress, Inc.," under contract with the Atlanta Regional Commission, December 31, 1984:

   I. Executive Summary, by Central Atlanta Progress
   II. Transportation Engineering, by Post, Buckley, Schuh, & Jerinigan, Inc., in association with Ewell W. Finley & Partners, Inc.
   III. Management Alternatives, by Deloitte Haskings & Sells
   IV. Marketing Strategy, by Tucker Wayne & Company
   V. Legal Issues, by Smith, Gambrell, and Russell
   VI. Technical Reports, by Catherine Ross and Associates

6. "International Boulevard Concept Plan," October 4-7, 1985; report of a conference co-sponsored by Central Atlanta Progress, Inc., and the City of Atlanta, Bureau of Planning, prepared by the Downtown Urban Design Assistance Team (DUDAT) for International Boulevard following the conference.

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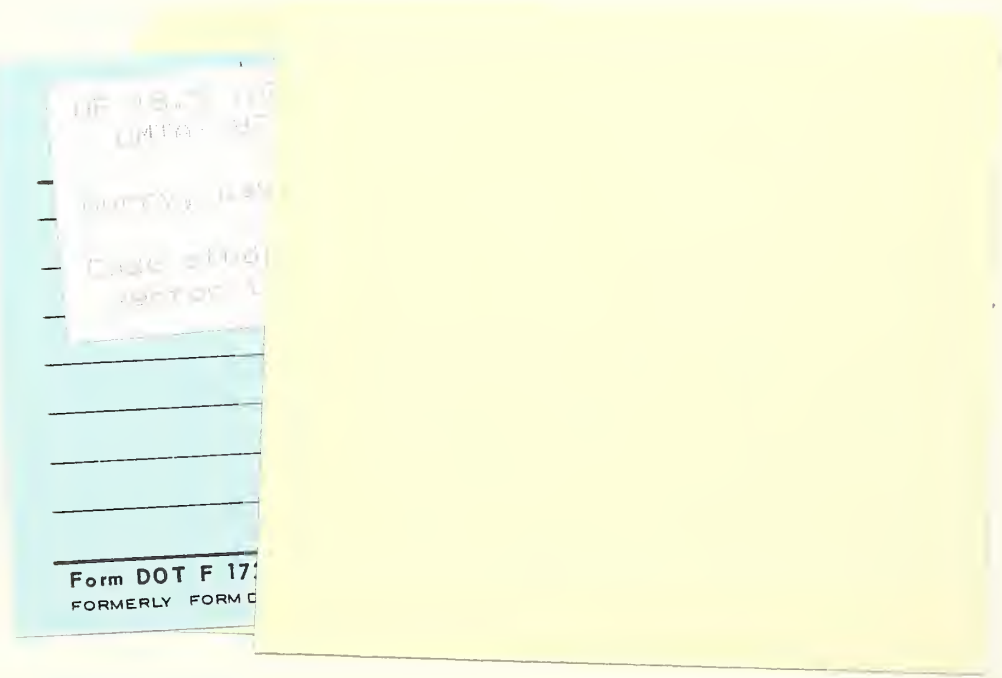
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